DOCUMENT RESUME

ED 057 068 24 TM 000 698

AUTHOR	Scheuerer, Daniel T.; And Others
TITLE	The Placement of Students in Viable Learning Situations Through the Use of Achievement Tests and Systems Engineering Rather than Through Annual Promotion and Retention. Volume I of II. Final Report.
INSTITUTION	Melbourne High School, Fla.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.
BUREAU NO	BR-6-1568
PUB DATE	Jun 70
CONTRACT	OEC-2-6-061568-0982
NOTE	308p.
AVAILABLE FROM	Materials copyrighted by BSCS available from Biological Sciences Curriculum Study, University of Colorado, P.O. Box 930, Boulder, Colorado 80302; Those from ETS, Test Development, Educational Testing Service, Princeton, N.J. 08540
EDRS PRICE	MF-$0.65 HC Not Available from EDRS.
DESCRIPTORS	*Achievement; Administrator Role; American History; Biology; Course Objectives; Educational Innovation; Educational Objectives; English; High School Curriculum; Management Systems; Mathematical Concepts; Models; *Nongraded System; Norms; School Schedules; *Secondary Schools; Student Characteristics; *Student Placement; Student Promotion; *Summative Evaluation; Test Construction
IDENTIFIERS	Brevard County; Florida; *Melbourne High School

ABSTRACT

This document, the first of two volumes of a final report, describes the various models which were utilized to support the development of a nongraded, phased, secondary school. It also contains the developed objectives which were used in conjunction with the on-going operations research, while Volume II contains the placement instruments specifically developed for the project. It should be noted that the objectives set forth in Volume I are not keyed to the instrumentation detailed in Volume II. See also TM 000 699. (CK)

BR 6-1568
PA 24
EA

ED037088

THE PLACEMENT OF STUDENTS IN VIABLE LEARNING SITUATIONS THROUGH THE USE OF ACHIEVEMENT TESTS AND SYSTEMS ENGINEERING RATHER THAN THROUGH ANNUAL PROMOTION AND RETENTION

COOPERATIVE RESEARCH PROJECT #6-1568

GRANT/CONTRACT #OEC-2-6-061568-0982

The Brevard County (Florida) School System

PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL BY MICROFICHE ONLY HAS BEEN GRANTED BY
Mr. Mayer - BSCS
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE U.S. OFFICE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER.

June, 1970

TM 000 698

The research reported herein was supported by the Cooperative Research Program of the Office of Education, U. S. Department of Health, Education, and Welfare.

VOLUME I OF II

ED057068

FINAL REPORT

Project Number 6-1568

Contract Number OEC-2-6-061568-0982

THE PLACEMENT OF STUDENTS IN VIABLE LEARNING SITUATIONS THROUGH THE USE OF ACHIEVEMENT TESTS AND SYSTEMS ENGINEERING RATHER THAN THROUGH ANNUAL PROMOTION AND RETENTION

Daniel T. Scheuerer

with the assistance of

Dr. B. Frank Brown
Richard L. Gillespie
James L. Scaggs
Kenneth D. Jenkins
Robert A. Mennella
Donald A. Treisman
Thomas S. Barrows
Dr. Bertram Spector

June, 1970

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

The research reported herein was performed pursuant to a contract with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

VOLUME I

INTRODUCTION

This is the first of two volumes prepared as components of the final report of USOE Cooperative Research Project 6-1568. This volume sets forth the scope of the project and describes the various models which were utilized to support the development of a nongraded, phased, secondary school. Volume I also contains the developed objectives which were used in conjunction with the on-going research. Volume II was designed to display the necessary achievement instruments developed specifically as a part of the operations research undertaken in the above project.

At the outset, several points should be emphasized to prevent misunderstanding and/or misinterpretation.

1. The instruments developed for the above projects and displayed in this volume were intended for use in a single school and were normed on the population of that school. Any attempt to apply them in other educational situations may be both misleading and unreliable.

The purpose for the project, insofar as the instruments displayed in Volume II are concerned, was to establish an acceptable procedure for developing instrumentation to support student placement and/or movement through a non-graded system. The instruments themselves should be considered as placement measures, not measures of achievement of specific skills.

2. The objectives set forth in Volume I are not keyed to the instrumentation shown in Volume II of this report. Instrumentation developed will reflect certain of these objectives, but was, of necessity,

designed before these objectives were fully developed. It was assumed that a commonality existed between the two components. This assumption was consensually validated by review of the instruments by teaching personnel. In cases where such validation could not be obtained, tests were modified or dropped. A prime example of this was found in the American History courses/phases. Since commonality of objectives were absent, no consensual validation by teaching personnel could be obtained. Instrumentation was therefore impossible to develop/select which could be validated by teacher consensus. This area was consequently dropped from the testing segment of the project.

The contents of this, Volume I, are designed to give an overall view of the project and to describe the nongraded system developed at the site of the operations research. The specific school used was Melbourne High School, Brevard County, Florida.

TABLE OF CONTENTS

Page

Chapter I. Purposes of the Study 1
  Preliminary Model 5
    Student Characteristics 5
    Instructional Management Systems 7
    Assessment 7
    Administrative Control Elements 7
Chapter II. Description of the Target School 9
  Overview: School and Community 9
  Philosophy and Objectives 13
  Curriculum Organization 16
  Assumptions Underlying the Phasing System 17
  Flow Charting of Program Sequence 19
  Course Codings 26
  Grading Systems 26
  Movement Between Phases 27
  Student Characteristics by Phase: Teacher Definition 30
  Behavioral Objectives 32
  Summary 32
Chapter III. Phase Placement Recommendations 35
  Melbourne High School 35
  Purposes of the Project 36
  Phase Placement Models 37
  Progress Test Development 40

Progress Tests 42
  Math Concepts, Phase 2 42
  Biology I, Phases 2-4 44
  English, Phases 2-4 47
  American History, Phases 3-4 53
Item Analyses 55
End of Course Tests 55
Score Reports and Local Norms 56
Suggested Phase Placements 57
Effectiveness of Phase Placements 69
Summary and Recommendations for Further Research 79
Chapter IV. Administrative Control Elements: Administrative Roles and Student Information Systems 83
Role Delineations of Administrative Staff 83
Functioning of Present System 88
Specifications for an Automated Student Information System . . 90
Suggested Organizational Structure for Incorporating an Automated Student Information System 91
New Job Descriptions 92
Implications for Teacher Roles 94
Student Capability Profile 95
Summary 96
Chapter V. Summary 97
Appendix A. Sample Master Schedule 99
Appendix B. Selected Course Objectives 101
Appendix C. Local Norms Tables 251
Appendix D. Student Capability Profile 301

LIST OF FIGURES

Figure

1-1 Preliminary Model 6

2-1 Flow Chart of Nongraded Secondary Business Program . . . 23

2-2 Flow Chart of Nongraded Secondary Mathematics Program . . 24

2-3 Flow Chart of Nongraded Secondary Science Program 25

2-4 A System for Phase Shifting at Discrete Intervals 28

3-1 Phase Placement, Parallel Regression Lines 37

3-2 Phase Placement, Crossing Regression Lines 38

3-3 Phase Placement, Non-Parallel, Non-Crossing Regression Lines 38

3-4 Phase Placement Form 61

3-5 Phase Shift Frequencies for 1967-1968 and 1968-1969 - Biology I 71

3-6 Phase Shift Frequencies for 1967-1968 and 1968-1969 - English 72

3-7 Phase Shift Frequencies for 1967-1968 and 1968-1969 - American History 73

3-8 Phase Shift Frequencies for 1968-1969 - Mathematical Concepts 74

3-9 Phase Shift Frequencies for 1967-1968 and 1968-1969 - Combined Across Course and Initiator 75

4-1 Present Organizational Chart of Melbourne High School . . 84

4-2 Suggested Organizational Structure for Incorporating an Automated Student Information System 93

LIST OF TABLES

Table		Page
3-1	Mathematics Progress Test Characteristics	43
3-2	Biology Progress Test Characteristics	46
3-3	Revised Biology Progress Test Characteristics	47
3-4	English Progress Test Formats	50
3-5	English Progress Test Characteristics, by Part	51
3-6	English Progress Test Characteristics, by Section	52
3-7	American History Progress Test Characteristics	54
3-8	American History Progress Test Means and Standard Deviations--Melbourne Population	55
3-9	End-of-Course Test Characteristics	56
3-10	Reduced Predictor Batteries: Discriminant Function Coefficients and Multivariate F Ratios for Males . . .	66
3-11	Reduced Predictor Batteries: Discriminant Function Coefficients and Multivariate F Ratios for Females . .	67
3-12	Multiple Regression Reduced Predictor Batteries: Zero Order and Multiple Correlation Coefficients for Males	68
3-13	Multiple Regression Reduced Predictor Batteries: Zero Order and Multiple Correlation Coefficients for Females	68
3-14	Fall 1968 Registration Percentages	78

CHAPTER I

PURPOSES OF THE STUDY

Within the scope of expanding educational innovations, the current concept of the nongraded secondary school is not new. Concerned with the sterility of the traditional school organizations in which students were either inappropriately placed in regard to their achievement or were stultifying in classrooms functionally dedicated to the propositions that all children of the same age are equally endowed with motivation, ability and background, forward-looking thinkers on education, whether from within education or from without, have begun to turn increasingly to the concept of nongradedness as the most promising approach to alleviating these problems.

Yet, while the nongraded concept may be most promising, it cannot remain static for it will tend to atrophy into a system as rigid as that which it seeks to replace. Thus, even the most promising ideas of this time must be examined and revised on a continuing basis so that they become dynamic reference points rather than static locksteps. The concept of nongradedness must be incorporated into a functioning organizational structure whose thrust is generated towards a sound commitment to flexible, differentiated instruction of students. Learning with, not through, such differential treatment is conceptually based upon a triad of factors:

1. The nature of student capabilities and interests.
2. The functional configurations of contents of instruction.
3. Creative approaches to an organization which will synthesize the varied cognitive, affective, and psychomotor aspects of the two

into a functional system.

Like most concepts, nongradedness must be translated into behavioral terms and into specific statements in order to be understood and translated into meaningful action.

Two components of the tri-dimensional construct of quality have received increasing attention of late. The nature of the learner is the first of these factors. The insights and correlations supplied by such behavioral sciences as psychology, sociology, anthropology, and education contribute to this component. Added to this are advances in the physical and biological sciences which are applicable to the individual learner. From the former comes such important understandings as the impact of environmental and/or cultural factors upon the child. The latter complements and augments these understandings by lending concrete or inferential support to usable theories of student behavior as well as providing definitive information on a variety of factors as to the capabilities of particular students or types of students. No one can ignore the potential educational import of advances in once unimagined areas such as artifically increased mental capacity upon which research work with DNA and various drugs has begun to touch. The field of psychometrics is increasing our ability to measure and predict hitherto enigmatic factors. The list is long and diverse. Let it suffice to say here that knowledge of the learner's capabilities and interests is rapidly expanding, though such an understatement obviously does not do justice to the explosion of knowledge in this area.

The second component which has received increased attention is that of contents, materials and approaches in instruction. Such advances in instructional configurations are widely known and recognized. Splendid progress has been made in the areas of science and mathematics, while less spectacular, but sound, improvements are evident in English and social studies. Nor can one neglect the enormous impact of advances in the application of technology in education. The subject of one thrust in this direction is that of increased experimentation and use of computer assisted instruction (CAI). Less spectacular innovations as the use of desk calculators in basic math instruction, use of 8 mm. filmstrips, installation of "wet" and "dry" carrels, and the creative design of school facilities are, however, presently more operational.

Though both thrusts are ideally suited to differential treatment of students, the catalytic factor of all these interactive improvements remains the organizational structure of the school and the procedures and attitudes it inculcates. Even the few organizationally nongraded schools may not be functioning efficiently enough. They should be improved while traditional systems are moved towards such improved organization.

In order to provide more meaningful data on nongradedness for students entering those years of schooling traditionally described as senior high school, one of the more well-known and established nongraded schools in the nation was selected for analysis. This school, Melbourne High, in Brevard County, Florida, had established an outstanding reputation. Its principal, B. Frank Brown, was a recognized leader in educational innovation on a broad scale as well as in the area of nongradedness. It was decided that concentration upon a single nongraded school might best be undertaken in the spirit of operations research to determine those factors necessary for nongrading schools and procedures which were appropriate for developing those factors.

Thus, this report pertains to the model for nongrading secondary schools as developed in conjunction with the on-going program at Melbourne High School. The constant curriculum flux necessary to keep abreast of changing demands created a particularily meaningful test situation in the school chosen. It was assumed that this aspect of development was not only desirable, but necessary, if the nongraded school was to meet demands placed upon it by constantly modifying curriculum and conditions so common in much of education. If the model developed could not adequately reflect the actual conditions under which quality education must function, then it would be of little use.

Adaptation of the model developed must be undertaken by individual schools or school systems if they are to provide the most accurate reflection of meeting their own community and student needs. Uncritical acceptance of the program and structure described at the test school in relation to the suggested model could be both misleading and inappropriate. Careful analysis of the individual school or district before acceptance of specific curriculum configurations, and/or placement measures or techniques, and/or organizational patterns cannot be emphasized enough. Hopefully, however, the findings of this project will establish guidelines which will serve as checkpoints in such development. The repertoire of techniques for the placement of students in viable learning situations through the use of achievement tests and systems engineering rather than general promotions and retentions developed should prove useful.

Procedures utilized in the development of various components of the project are described in the appropriate sections of this report rather than delineated at this point. It was felt that this organization would be most appropriate.

Preliminary Model

In order to integrate the complex elements involved in nongrading · modern secondary school, a rather simplistic initial coordinating model was developed. This model was intended to give an overall picture of the total system before each component was broken down into sub-elements and examined.

The four basic components of the model were comprehensive enough to cover most possibilities encountered in a description of the nongraded process. As shown in Figure 1-1, the basic components were conceptualized as student characteristics, instructional management systems, assessment, and administrative control elements. A brief description of each element follows.

I. Student Characteristics

This component of the preliminary model is primarily descriptive and must be used as a basis for decisions concerning the configuration of the instructional management system as well as for determination of the nature of assessment procedures and of selected control functions; e.g., student health services, number and/or type of offerings, class loads, etc. Characteristics should be divided into group and individual reports. A definite need for accurate computer management of the data should be noted, but more important is the need for the mechanisms of categorization, delineation, gathering and use of the necessary data.

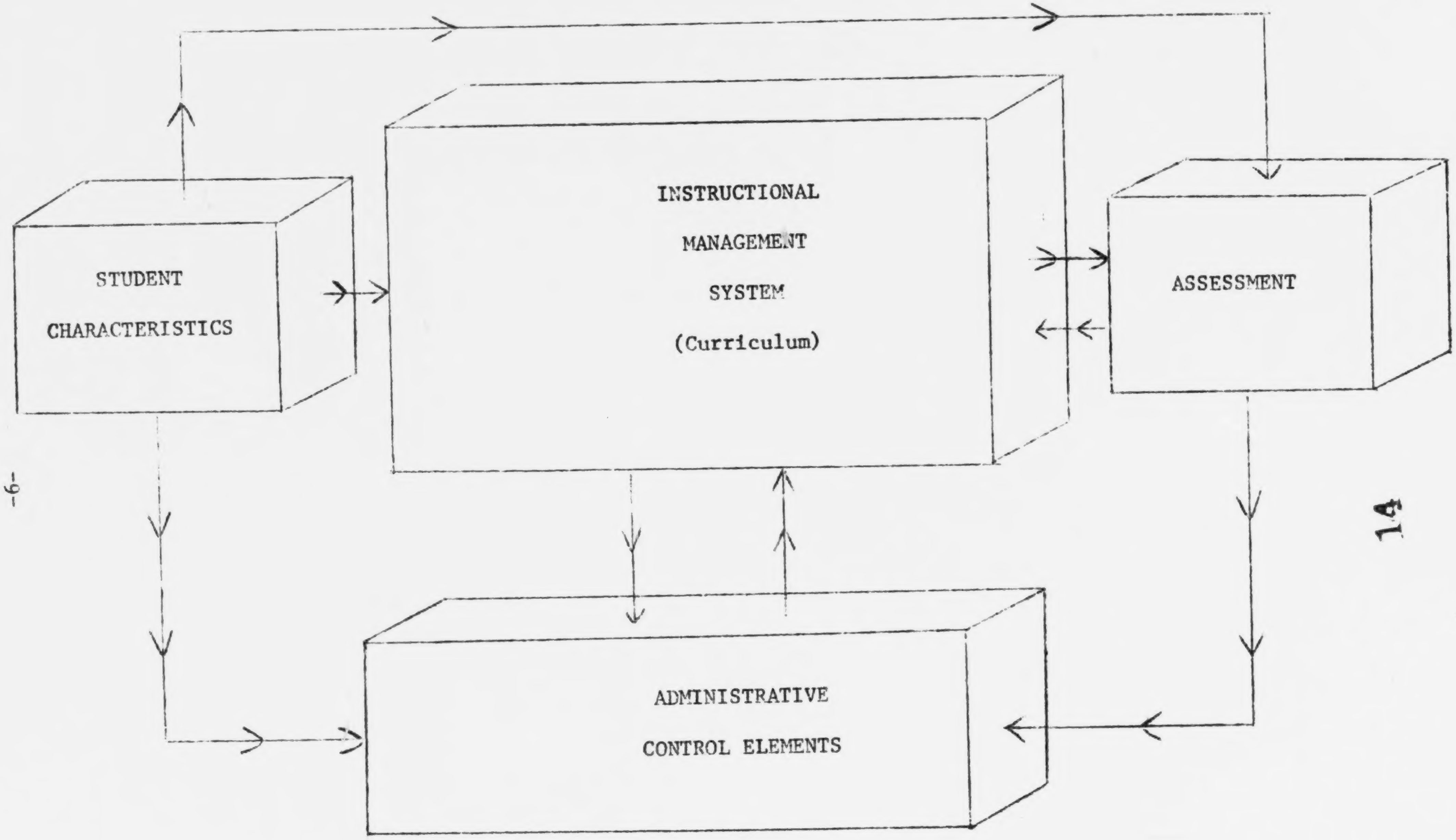

STUDENT CHARACTERISTICS
INSTRUCTIONAL MANAGEMENT SYSTEM (Curriculum)
ASSESSMENT
ADMINISTRATIVE CONTROL ELEMENTS

Figure 1-1

PRELIMINARY MODEL

II. Instructional Management System of Curricular Offerings

A plethora of instructional management systems within discrete areas now exists. Pre-packaged programs are available in almost all subject matter areas, but there remains to be developed a comprehensive coordinating framework which is functionally useful to teachers. Progress along these lines is rapidly taking shape with the development and application of unifying taxonomies. This management system was seen as having a basis in discrete objectives. The development of such objectives consumed the bulk of work done in this area on this project.

III. Assessment

The assessment component of the model is intended to represent three distinct types of needs.

1. Assessment of individual and group achievement in the curricular systems as well as followup studies on students.
2. Assessment of management controls and procedures.
3. Assessment of the efficacy of the curricular offerings in relation to the needs of students and the demands of society.

It should be apparent that multiple data usage may be effected between components I and III, but it should be noted that in no sense are they congruent. The data configurations would need to be modified to fit the stated purposes of description and assessment.

IV. Administrative Control Elements

This component of the model deals with the bases and processes of decision-making in the school and with the development of coordination of repetitive, but necessary tasks. Recognizing that this project was keyed to instruction, little direct attention was directed towards necessary support services such as lunch room management, custodial organization, transportation scheduling and the myriad other important management functions which create a smoothly operating school, but relate only tangentially to instruction.

Such systems should not be allowed to interfere with the instructional system and periodic reviews should be undertaken to assure that the proper perspective is maintained in regard to them. Informed teachers make excellent critics of such systems and may be used to evaluate them.

Attention in this project was directed towards such elements as counseling roles and procedures, staff relationships, inter-school feedback mechanisms, and administrative role description.

CHAPTER II

DESCRIPTION OF THE TARGET SCHOOL

Melbourne High School has a unique reputation as one of the first and leading attempts at nongradedness on the secondary school level. Because activities in the project centered upon this single school, it is necessary to describe the school in order to provide perspective and background. The majority of the information used in this description was drawn directly from the school staff and its reports, and from direct observation of the functioning school.

Overview: School and Community

Melbourne High School is located 40 miles south of Cape Kennedy in the southern portion of Brevard County, Florida. The Melbourne geographical area is inhabited by approximately 32,000 persons residing in several diverse communities.

The economy of the Melbourne area has been generally healthy and vigorous. Although there have been two major cutbacks in Cape Kennedy personnel and the headquarters for the National Aeronautical and Space Administration was moved to Houston in 1965, the economy has continued to develop at a moderate rate. The largest single civilian labor force was involved in service occupation, followed by manufacturing, trade occupations and retail trades. The unemployment rate remained at a relatively stable 2.1%. The largest number of males were employed in professional and technical occupations, particularly engineering; the largest number of females were employed in clerical occupations.

In 1965, the per capita income was $3,697.00, the highest in the state of Florida. Gains in per capita income were consistent throughout the decade of the 1960's. In 1969, the assessed valuation of the school district was $1,030,890,935. The expenditure per student in average daily attendance was $605.73. Of this amount, 70.1% was obtained from State sources, 20.0% from local taxation, and Federal sources provided 11.9% of the total.

One unique feature of the Melbourne community was its diversity of population. There were few native Floridian families; however, a highly significant portion of the population in 1969 was much more stable than it was in the early years of the past decade. The median grade education level for both males and females was 12.1.

The enrollment of Melbourne High School was approximately 2200 including approximately 700 seniors, 710 juniors and 810 sophomores. This student population was composed of a variety of backgrounds. They represented a diverse socio-economic configuration, although the majority of the students were from middle and upper-middle families. From 1966 to 1970, the student population was composed of a variety of racial and ethnic backgrounds. In 1969, there were approximately 1868 Caucasians, 300 Negro students, and a sparse representation of Chinese, Indian, Spanish and Spanish-American students. This student body remained relatively stable over the past several years with 82% of the senior class having spent three years in Melbourne High School. Of those students who withdrew from the school, the largest number did so because of a change of residence and transfer to another school. Because of the nature of the occupational and educational level of the parents, a significant majority of students had aspirations for further education upon the completion of high school.

During the years that the school was being studied, the educational system within which it operated suffered several severe dysfunctions. Desegregation of the total district upset the normal functions of the schools while directly modifying the size of the school and background of students at Melbourne High School. The superintendency during the four year period was held by three separate individuals and there was considerable resource personnel turnover. Directly affecting Melbourne High School was the elevation of Dr. B. Frank Brown to the superintendency after over ten years as principal of Melbourne High School. Brown was the acknowledged leader and the prime force behind the nongraded system. Staff apprehension about the continuation of the system developed was naturally high. If, however, the system was to prove effective, it could not depend upon a single person for continuance. Fortunately, the principal replacing Brown was committed to nongradedness and the system was continued.

Shortly after the change in the principalship, Melbourne High School and most other Florida schools underwent the 1967 teacher "walk-out." For almost a month, twenty percent of the staff at Melbourne High School participated. For both those who remained and those who walked out, the situation caused long-lasting communication problems.

It would be interesting to obtain research data on the effects of system unbalance caused by these and other unstabilizing incidents. None is available.

Bertram Spector, principal investigator for the New York Institute of Technology, which acted as a major subcontractor on the project noted these and other problems in his final report.

> During the program period, there have been personnel changes including 4 project directors, 2 principals, 7 vice principals and a major faculty turnover at Melbourne High School, 3 Brevard County Superintendents, 3 new Brevard County high schools, broad changes in County philosophy pertinent to model high school programs, the utilization and discard of County computer-based information and record systems, a teacher strike, a County attempt at integration, an active vocal (and perhaps militant) organization of faculty, and widespread and significant reappraisal of issues of autonomy or model replicable school systems.
>
> It is important to recognize that these factors, and their impact are not peculiar to Melbourne High School, or, in fact, to Brevard County high schools, but represent a national soul-searching attempt to identify systems and patterns that are educationally sound and acceptable to all participants in the educational world, including students, parents, teachers, administrators, and the community and political structures with which these parties interact.
>
> No Utopian system has been developed. Nevertheless, the study of the process of educational change under conditions of environmental change has yielded insight into several crucial principles and elements which in themselves may be considered an achievement of no minor consideration. There is little doubt, for example, that the political tone of a community may be a more important factor (eg., de facto segregation issues) than any change of innovational educational improvement in methods and resources, or technological development in materials and media. There is likewise little doubt that each influences the other which suggests a novel unified interactive approach. This is another way of emphasizing what is well known already - but rarely applied - the removal of barriers that cause educational isolationism in a community system. One key item in this development of an approach to change is the AR factor (attitude receptivity). The AR factor lags the intellectual receptivity which can be achieved through concentrated orientation and seminar sessions relatively rapidly. The AR factor takes time and patience. It is the emotional counterpart of intellectual receptivity, both of which are prerequisite for successful implementation of strategies and concepts that are foreign to experience.[1]

---

[1] Spector, Bertram, "Final Report of Subcontract for Melbourne High School." Monograph. October 1, 1969. (pp. 1-2).

The changes and attitudes noted by Spector created definite handicaps during the on-going project.

Philosophy and Objectives

Against the background described above, the target school developed and implemented a comprehensive program based upon the philosophy and objectives set forward in this section of the report.

The educational responsibility of Melbourne High School was seen as providing psychological environments, curriculum and physical structures that would be conducive to the enlargement of the intellectual, emotional and aesthetic lives of its students.

The primary functions of education at the school are to provide every student with intellectual competence and realization of self. The special relationships that the student establishes with the material he studies, with his fellow students and with his teachers, are central to this process of education. It is the school's aim and endeavor to maximize the effectiveness of these relationships in order to foster the student's intellectual growth and self-awareness.

The intellectual development of the student is considered a continuing process which necessitates school means for increasing his ability and motivation to learn. The development of the student's intellectual ability depends upon other school means for diminishing his constraints to learning, reinforcing his understanding of value assumptions underlying approaches to knowledge, improving his skill to apply several methods of approaching knowledge, strengthening his ability to think conceptually and to utilize basic concepts, and perfecting his cultivation and expression of creativity. The stimulation of intellectual motivation in the student requires the relating of learnings to the student's human concerns so that he will manifest a personal desire for learning and will demonstrate a creative and imaginative intellectual curiosity.

Self-realization involves the resolution of conflicts resultant from confrontation with a variety of experiences. Such confrontation produces consciousness of one's goals, styles and values: realization of one's abilities, limitations and potentialities; and awareness of one's essential humanity. The process of self-realization is continuous throughout one's life. Therefore, it is essential that Melbourne High School contribute to the student's transition from youth to adulthood.

The education of the individual must involve the two processes of intellectual and personal growth, for to promote one to the neglect of the other is to diminish the potential contribution of Melbourne High School to the individual and his society. The goal of education must be the establishment of an environment in which these processes are inseparable, in which the advancement of one fosters the growth of the other.

Melbourne High School endeavors to encourage and enhance relationships between the student and his teachers. Melbourne High School is staffed by many individuals, each with an individual role in the educational process. The student is the integral part of the school. The student, because he is ultimately responsible for his own development, is considered to be an active seeker of knowledge about himself and the world around him. Similarly, the teacher is an active seeker of knowledge whose breadth and depth of experience prepares him to enrich and guide the growth of the student. The student-teacher relationship should therefore be one of creative exchange of experience, of cooperation in the pursuit of knowledge, and of mutual respect for differing perspectives and values.

Embodied in the philosophy of Melbourne High School is a search to enable each individual student to attain his maximum potential. Operating on the premise that there is nothing more unequal than equal treatment of unequals, a variety of differing types of education programs is provided in order to meet the requirements of all types of individuals. Each of these programs is designed to encourage curiosity and inquiry, while never forgetting that imagination is as important as knowledge. Melbourne High School is therefore dedicated to fulfilling the following objectives:

1. To develop decision-making skills and provide significant opportunities to exercise those skills.
2. To provide the concepts and skills necessary for achieving economic literacy.
3. To foster a recognition of the role, dignity, and value of work in American society.
4. To develop an awareness of and appreciation for differing cultural, social, and political traditions.
5. To foster a sense of individualism tempered by open-mindedness.
6. To aid in developing a concept of self-worth.
7. To develop the ability to synthesize material from one sphere of activity to solve problems in another.
8. To stimulate intellectual curiosity and creativity.
9. To provide the climate and curricula for the student to develop individual academic goals.
10. To develop the ability to generalize from the concrete to the abstract.
11. To aid in the development of his own intellectual competency.

12. To aid in the formulation of individual moral standards and values.

13. To promote an awareness of potential.

14. To foster an appreciation of the physical environment as a source of present and future resources and a depository of beauty.

15. To encourage effective human relationships based on mutual respect.

16. To develop, in the student, personal responsibility, especially with regard to the pursuit of his own education.

17. To foster a desire for world peace and a healthy respect and attitude for the workings of democracy.

18. To develop measurable indicators of behaviors indicative of growth toward personal mental and physical health.

19. To provide catalysts that promote and stimulate environmental curiosity.

Curriculum Organization

The nongraded multiphased program provides for different rates and means for progressing toward achievement of educational goals. A multiphase structure has been established to provide for more individualization of instruction. The student places himself into a "phase," based on his past achievement record, his achievement test scores, teacher recommendations, and his knowledge about himself.

Phases are identified and described as follows:

Phase 1	Content is designed for students who need special assistance in small classes.
Phase 2	Content is designed for students who need more emphasis on the basic skills.
Phase 3	Content is designed for students who have an average background of achievement.

Phase 4	Content is designed for extremely well-prepared students desiring education in depth.
Phase 5	Content is designed for students who are willing to assume responsibility for their own learning and pursue college level courses while still in high school.
Phase X	Content which does not accommodate student mobility; i.e., typing, physical education, driver education, band, etc.
Phase Q	The Quest Phase of the curriculum is provided for students whose creative talents are well developed. In this phase, a student may research an area in which he is deeply and broadly curious either to develop creative powers or in quest of knowledge.

Appendix A displays a sample master schedule for the Fall semester of 1970. Examination of this schedule reveals not only the use of phasing, but also the breadth of the program offered.

Students move into any phase at any time during their tenure at Melbourne High School. Students who would normally be classified as sophomores, juniors or seniors might be found in the same section. Students may progress through phases at their own rate of speed. Since individualization is encouraged, a student may remain in a given phase/course for more than one year without repetition of materials, but with emphasis upon defined objectives which continues over a period of time.

Assumptions Underlying the Phasing System

The phasing system is premised upon two assumptions:

1) *Groups of students will at a given time have common needs.* As long as individualization is available within the group and as rephasing is feasible at defined times, students may progress at their own rate within "courses" (defined content segments) and may move upwards (up-phase) or downwards(down-phase) as they display appropriate

achievement of the defined objectives. The inability to display such achievement within a course, or to be able to maintain the established instructional pace would result in a recommendation for down-phasing.

2) Phasing represents a nongraded system which is readily applicable to existing school situations without additional costs and without complete retraining of existing staff. Most schools are not functionally capable of completely individualizing instruction. In short, totally individually prescribed instruction (IPI) requires sophistication on the part of staff and, more importantly, presumes universal student motivation. These factors are simply not currently present in most school situations. The relative cost of such systems at present would appear to be prohibitive for the vast majority of school systems. This is not to negate the value of individually prescribed systems, nor to indicate that the phasing system is better. The assumption is based simply upon the recognition that the phasing system is more immediately within the available resources of most school systems. It has been suggested that the multiphasic system is an intermediate form of nongrading that stands between more traditional systems and completely individualized ones. This would appear to be an accurate observation.

The phased system allows for the development of organizational controls, particularly in the areas of student placement, staff assignments, student movement, counseling, and record-keeping, which are more compatible with existing educational situations than other forms of nongrading.

A more complete discussion of possible phasing models is found in Chapter III of this report.

Flow Charting of Program Sequence

In order to establish clear relationships within and between phases, three essential steps were considered necessary. These were 1) establishment of course/phase descriptions, 2) establishment of more detailed objectives by course by phase, and 3) flowcharting by program sequence.

Figures 2-1, 2-2, and 2-3 show the developed flow charts for three areas as illustrative examples. These flow charts have been extended downwards into what would normally be considered junior high schools.

The secondary business program shown in Figure 2-1 illustrates a program configuration which combines phasing by level with "X Phase" courses. Note that no Phase 1 courses are included nor are any Quest (Q) courses. For the advanced student, independent study may be arranged. Also, note that some courses have distinct phase designations while others indicate offerings at three or less phase levels. The description below indicates the course description for Consumer Economics.

> CONSUMER ECONOMICS (Consumer Economics)
>
> A student of consumer economics should learn to use wisely the goods and services produced by business, and he should learn the principles of economics that are essential for participation in our society as intelligent voters and citizens. All major topics of consumer economics are discussed, such as personal income management, using credit, principles of good buying,

social security, insurance, savings and investments, and housing problems. The student learns the uses of mathematics for everyday living -- how to be a wise consumer.

Phase 2 -- Two semesters

Text: Consumer Mathematics Series,
Knowles, Behavioral Research Lab

Phase 3 -- One semester

Text: Consumer Economics, 3rd Edition,
Wilhelms, McGraw-Hill

Phase 4 -- One semester

Text: Consumer Economics Problems, 7th
edition, Wilson, South-western

Note that the basic course description remains the same, but that the materials and time are varied by phase. Selection of activities and materials for such courses are related to the general student characteristics developed by experienced teaching staff members. (These characteristics are described in a later section of this report.)

The secondary mathematics program shown in Figure 2-2 illustrates a program with different requirements than that of Business. Note that a series of branching alternatives are available to the student. At given junctures, the student may elect to proceed to different contents. He may, for example, elect to move from Algebra I, Phase 3, to Algebra II, Phase 3, Phase 4, or Phase 5, or Geometry, Phase 3.

Note also that enrichment or Quest phases are structured into the program for advanced students. The course description for Math V (Phase 4-5) follows.

MATHEMATICS V (Mathematics V)

Phases 4-5 One Semester

This is an enrichment course which may be taken concurrently with higher level courses beyond Algebra II in the regular curriculum or afterwards as a follow-on course should the regular curriculum be completed before graduation. The course covers topics in probability with statistical applications and the mathematics of matrices. Additional topics may include computers and computer programming and field problems in mathematics.

Texts: Probability and Statistics. Willoughby, Silver Burdette Company, 1968.

The Mathematics of Matrices, Davis, Ginn and Co., 1967.

Again, the time sequence is varied to allow for student variations in speed and interest.

Figure 2-3 shows the flow charting of the science program. Again, the basic branching structure is shown. It should be noted, however, that this program includes the Quest (Q) phase as a distinct component. This Q Phase is designated as being available to students in Phases 4 and 5. Again time is treated as a variable. It is labeled as "NSF Research." Note that it is available to students at all levels from years in school 7 to 12. The course description is found below. It should be noted that considerable freedom is exercised in this course. Objectives are developed on an individual or small group basis and thus may vary from student to student. Provisions for this type of activity should be included in the total program at all times.

NSF RESEARCH (NSF Research)

Phases 4-5 One Semester

This is a special program designed to do research in varied fields of science. Students must be academically trained in some physical or biological science, be willing to work during free hours, and show an enthusiastic attitude toward the research problems decided upon for the course (limited number).

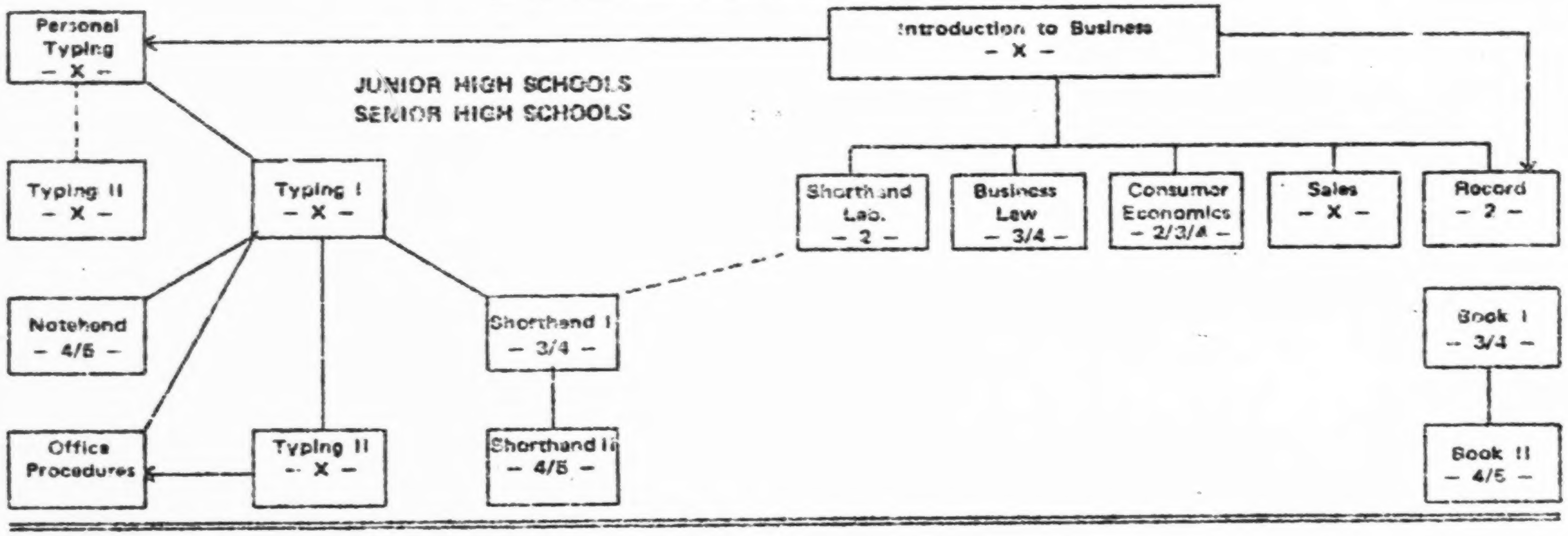
In more commonly taken subjects; i.e., American History, Phase 3, such provisions may be provided through short, teacher/student structured research projects, use of "contract" plans, in-class seminars, and other accepted teaching techniques.

Figure 2-1

FLOW CHART OF NONGRADED SECONDARY BUSINESS PROGRAM

BREVARD COUNTY, FLORIDA

SECONDARY BUSINESS PROGRAM


Introduction to Business
– X –
JUNIOR HIGH SCHOOLS
SENIOR HIGH SCHOOLS
Personal Typing
– X –
Typing II
– X –
Typing I
– X –
Notehand
– 4/5 –
Office Procedures
Typing II
– X –
Shorthand I
– 3/4 –
Shorthand II
– 4/5 –
Shorthand Lab.
– 2 –
Business Law
– 3/4 –
Consumer Economics
– 2/3/4 –
Sales
– X –
Record
– 2 –
Book I
– 3/4 –
Book II
– 4/5 –

PROBABLE SEQUENCE BY PHASE LEVEL

PHASE X	PHASE II	PHASE III	PHASE IV – V
PERSONAL TYPING			
INTRODUCTION TO BUSINESS			
TYPING I	SHORTHAND LAB	SHORTHAND I	SHORTHAND I
		SHORTHAND II	SHORTHAND II
TYPING II	RECORD KEEPING	BOOKKEEPING I	BOOKKEEPING I
			BOOKKEEPING II
		BUS. LAW	BUS. LAW
SALES	CONSUMER ECONOMICS	CONSUMER ECONOMICS	CONSUMER ECONOMICS
OFFICE PROCEDURES			NOTEHAND

Vocational Office Education

Figure 2-2

FLOW CHART OF NONGRADED SECONDARY MATHEMATICS PROGRAM:

BREVARD COUNTY, FLORIDA

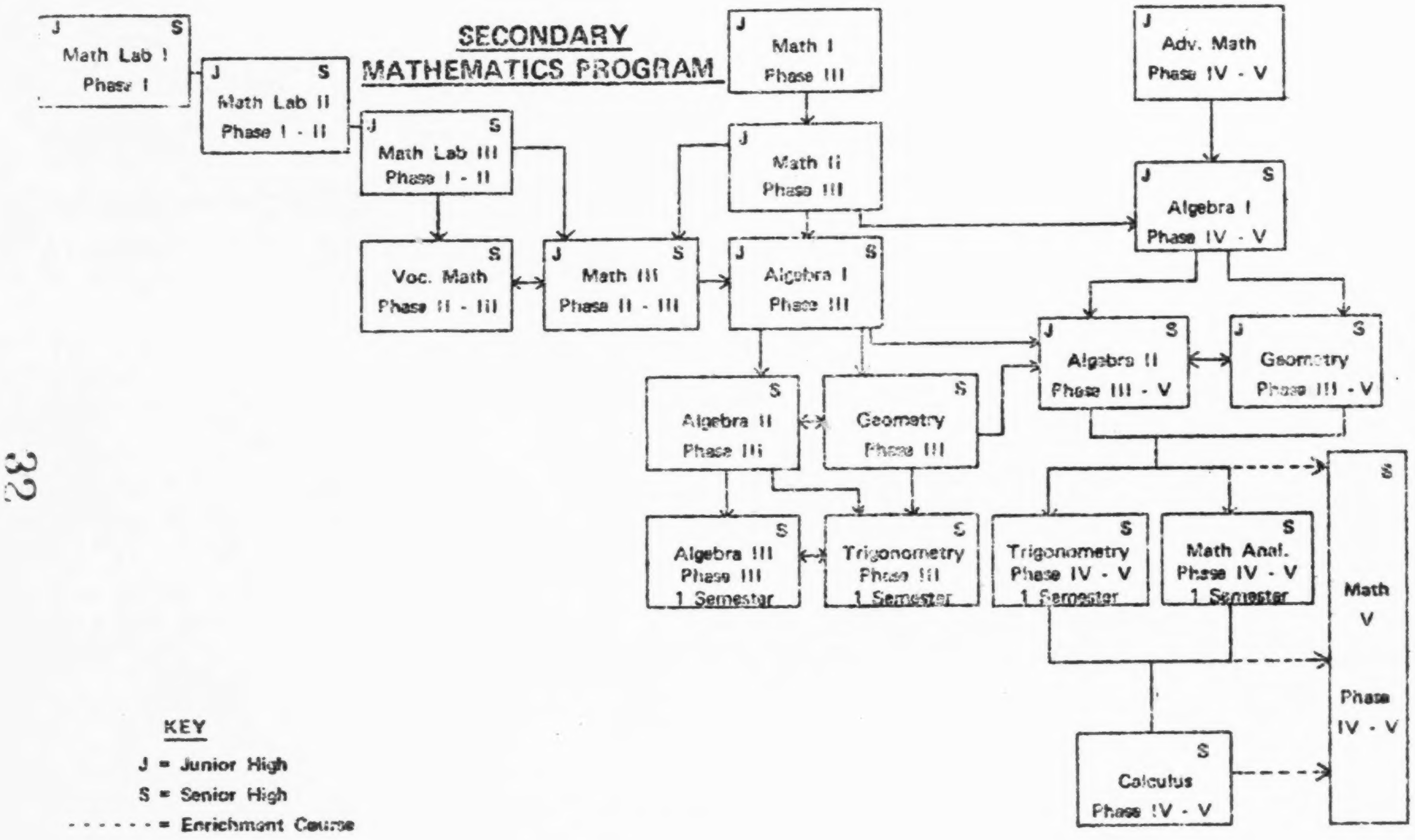
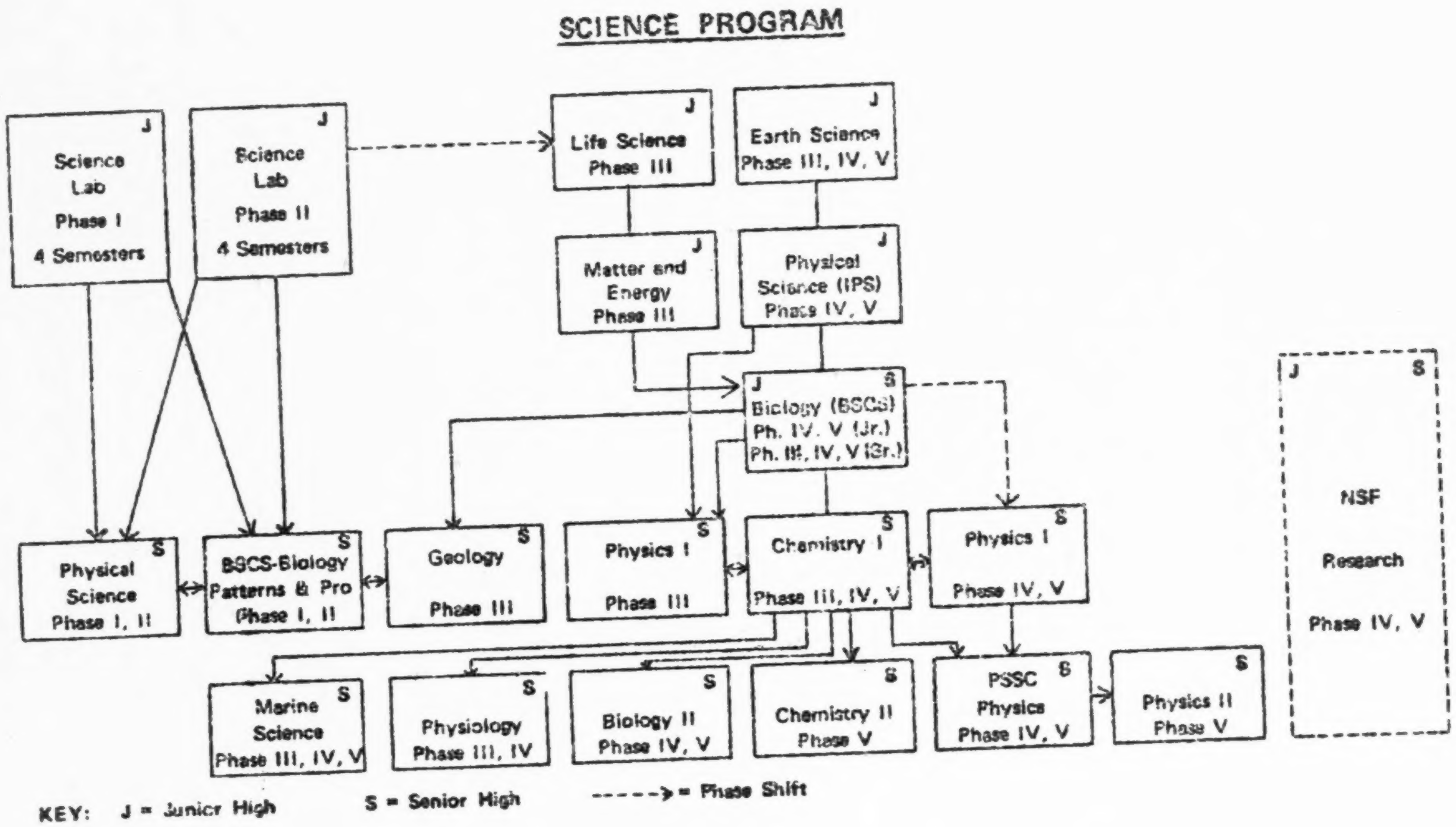

SECONDARY MATHEMATICS PROGRAM
J Math Lab I Phase I S
J Math Lab II Phase I - II S
J Math Lab III Phase I - II S
Voc. Math Phase II - III S
J Math III Phase II - III S
J Math I Phase III
J Math II Phase III
J Algebra I Phase III S
Algebra II Phase III S
Geometry Phase III S
Algebra III Phase III 1 Semester S
Trigonometry Phase III 1 Semester S
J Adv. Math Phase IV - V
J Algebra I Phase IV - V S
J Algebra II Phase III - V S
J Geometry Phase III - V S
Trigonometry Phase IV - V 1 Semester S
Math Anal. Phase IV - V 1 Semester S
Calculus Phase IV - V S
Math V Phase IV - V S
KEY
J = Junior High
S = Senior High
- - - - - - = Enrichment Course

Figure 2-3

FLOW CHART OF NONGRADED SECONDARY SCIENCE PROGRAM:

BREVARD COUNTY, FLORIDA


SCIENCE PROGRAM
Science Lab Phase I 4 Semesters J
Science Lab Phase II 4 Semesters J
Life Science Phase III J
Earth Science Phase III, IV, V J
Matter and Energy Phase III J
Physical Science (IPS) Phase IV, V J
J Biology (BSCS) Ph. IV, V (Jr.) Ph. III, IV, V (Sr.) S
Physical Science Phase I, II S
BSCS-Biology Patterns & Pro Phase I, II S
Geology Phase III S
Physics I Phase III S
Chemistry I Phase III, IV, V S
Physics I Phase IV, V S
Marine Science Phase III, IV, V S
Physiology Phase III, IV S
Biology II Phase IV, V S
Chemistry II Phase V S
PSSC Physics Phase IV, V S
Physics II Phase V S
J NSF Research Phase IV, V S
KEY: J = Junior High
S = Senior High
-----> = Phase Shift

Course Codings

The school or system undertaking the nongraded, multiphased system should consider strongly including course codings compatible with computer systems. Such coding systems are best developed in relation to the individual systems curriculum and data processing system. Included in the system should be:

1) Phase code,
2) Subject code,
3) Time code,
4) Prerequisite indications and/or suggested sequence, and,
5) Suggested grade level (if desired).

Item 5 above would appear necessary for student transfers outside the system. Until more widespread nongrading occurs, the student who transfers may experience difficulty at his new school unless some grade level designation can readily be passed to it. Additionally, various outside forces demand grade level information and grade rankings on students. Rather than create unfortunate experiences for students, the nongraded school should maintain these records as a student service.

Grading Systems

A variety of grading systems exists. Until general acceptance of more detailed evaluative reports become widespread among the public, care should be exercised in breaking the more traditional "A, B, C, D, F" system. At Melbourne High School, students have the choice of electing the traditional system or exercising a "pass-fail" option of reporting. For selected courses, particularly in Phases 1 and 2, grades of "Satisfactory-Unsatisfactory" are used. For the school that feels that rank-in-class must be established, such two-point scales are not advisable. Frequently students themselves express a preference for grades. Because of this, again, care should b exercised in establishing grading procedures. Strong parental and student public relations programs should be involved. In some cases, the negative reactions to the modification of grading systems were stronger than those towards actual modifications of the curriculum. While this seemed inconsistent, its occurence has been noted by guidance counselors, teachers and administrators at Melbourne High School.

Movement Between Phases

While initial placement in phases is examined in Chapter III of this report, brief mention of phase change procedures should be made here. Figure 2-4 displays a proposed system for phase shifting at discrete intervals. While this system was not operated at Melbourne High School, the findings reported in Chapter III indicate strongly that such a system is desirable.

One important factor which must be considered that would appear to be a definite weakness in the Melbourne program is that of "content lag" between phases. For the "phasing-up" student, a definite lag in objectives and/or material covered may occur and, unless care is taken, the student may find himself over-burdened. For the "down-phasing" student, repetition of objectives might occur, giving him an over-confident view of his abilities in relation to the content objectives.

Two methods for offsetting these circumstances might prove feasible.

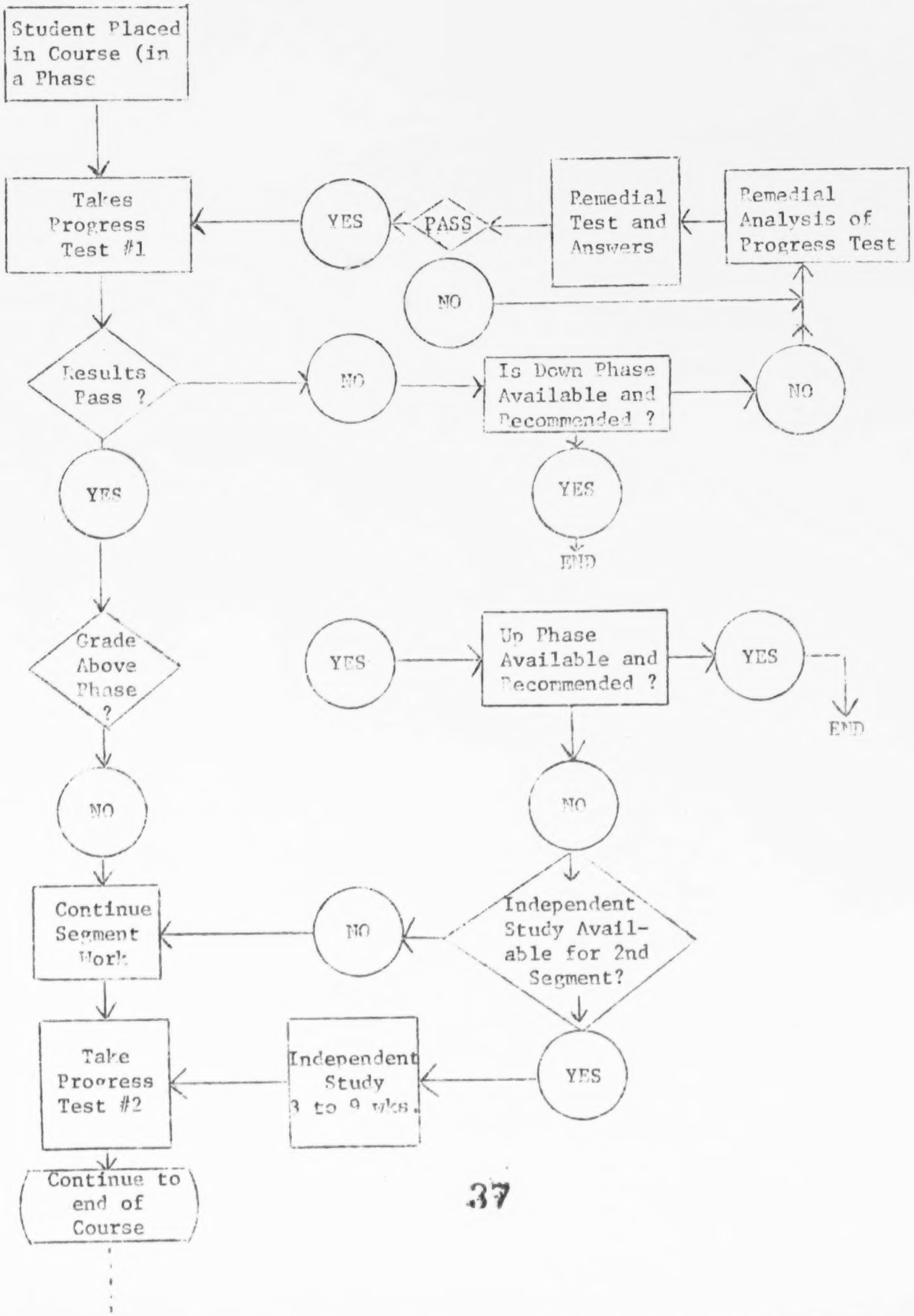
1. The "way-station" effect. When a student evidences readiness or need for phase movement, he might be scheduled into defined "way-stations" for intensive work on objectives or content covered. Directed study in specialized areas would be undertaken and a gradual "easing into" the suggested phase might occur. This approach requires a very well-defined and coordinated curriculum and well-developed remediation or acceleration packages or programs. Under normal school conditions, it would require defined times for phase changes and ample lead time for "way station" work.

2. Blocked Curriculum Objectives. This system would require discretely developed units which are not dependent upon previous work as background. Once basic skills were mastered, the student could move between phases with relative ease because the content would not be dependent on previous exposures. Six, nine, twelve, or eighteen week units might be used. However, the structure of certain disciplines; e.g., mathematics and science, does not lend itself readily to this system. Inconvenience for teachers would also appear to be increased. Administratively, unless ample personnel were available, either system could become cumbersome and unfeasible.

No completely acceptable solution was found in the course of this project. Perhaps the best approach would be careful initial phasing; intensive student evaluation during the first weeks of school and rephasing on the basis of that evaluation; and selected rephasing on a limited basis during the remainder of the term. The logical time for broader rephasing in a semester system such as is operated at Melbourne High School would be at the beginning of the second semester when the

Figure 2-4

A SYSTEM FOR PHASE SHIFTING AT DISCRETE INTERVALS


Student Placed in Course (in a Phase
Takes Progress Test #1
YES
PASS
Remedial Test and Answers
Remedial Analysis of Progress Test
NO
Results Pass ?
NO
Is Down Phase Available and Recommended ?
NO
YES
YES
END
Grade Above Phase ?
YES
Up Phase Available and Recommended ?
YES
END
NO
NO
Continue Segment Work
NO
Independent Study Available for 2nd Segment?
Take Progress Test #2
Independent Study 3 to 9 wks.
YES
Continue to end of Course

total process might be repeated on a smaller scale.

Care must be taken not to discourage student initiative, but, equally, controls are necessary to prevent abuse, intentional or unintentional, of the system by students.

Student Characteristics by Phase: Teacher Definition

Participating staff members at Melbourne High School developed the following generalized descriptions of students by phase. These descriptions are recorded as the staff members defined them. They represent the views of student characteristics by phase as developed by teachers of phased students. It should be noted that overlapping characteristics occur. Student motivation and behavioral characteristics are coupled to suggest a composite. Obviously, exceptions occurred and teachers were cognizant of them. While these descriptions are not "scientific," teachers found them helpful.

Phase 1

a. 6th grade reading level or below
b. Negative feeling toward school in general
c. Dependent upon continuous teacher direction
d. Lack of motivation in subject matter
e. Requires immediate supervision of work
f. Oriented to concrete or "reality" centered activities
g. Failure syndrome
h. Needs immediate and continuous reinforcement and/or attention from the teacher
i. Has short retention rate
j. Adjusts social/emotional reactions to unfamiliar situations slowly
k. Short attentions span
l. Prefers visual and/or manipulative materials
m. Responds well to routine or familiar tasks
n. Has limited vocabulary and difficulty in adjusting speech patterns to different audiences
o. General achievement low
p. General skills achievement low
q. Needs continuous reassurance of relationship to the subject matter and/or the teacher
r. Responds better to highly structured situations rather than to ambiguous ones

Phase 2

a. 7th to 10th grade reading level
b. May be either brash and overcompensating or reticent and retiring in class
c. Verbally proficient within restricted vocabulary
d. Little technical background in subject matter
e. Usually displays aptness in peer group sociability
f. Responds well to manipulative tasks
g. Not self confident with subject matter
h. Restricted, but expanding, vocabulary
i. Needs continuing reinforcement in work and teacher/student relationships
j. Negative feelings towards school
k. Oriented to concrete, tangible materials
l. Limited writing ability
m. Failure syndrome

Phase 3

a. 8th grade reading level or higher
b. Literal minded
c. Outspoken, strong immediate and possibly negative response to assignments, tests, activities, etc.
d. Talks in terms of peer group symbols
e. Verbally non-creative
f. Concrete orientation
g. Concern for immediacy and pragmatism (what's this got to do with me?) of subject matter or activities
h. Tends not to complete long term assignments on time
i. Interest and attention span erratic
j. Seeks redundant teacher direction and/or explanation
k. Erratic skills development or achievement
l. Will not accept responsibility for non-concrete or clearly defined work
m. Primarily oriented to present situations (e.g., adolescent society and interest)
n. "Average" retention rate
o. Concern for passing, but not necessarily superior, grade

Phase 4

a. Reading level 10th grade or above
b. Supported by peer initiated intellectuality
c. Able to think logically, figuratively, symbolically
d. Dependent on occasional teacher direction
e. Primarily non-initiating of activities with occasional self direction
f. Grade conscious (A or B)
g. May be under parental pressure to succeed
h. Well developed skills in subject matter

i. Aware of skills deficiencies
j. Concern for "future" (Will I need this later?")
k. Can understand abstractions

Phase 5

a. 12th grade reading level or above
b. High skills proficiency
c. Well formed study habits
d. Interest in dealing with ideas or abstractions
e. Ability to establish relationships independently and/or creatively
f. High retention rate
g. Ability to absorb content with infrequent repetition
h. Future oriented
i. Self motivating
j. Handles long term assignments with responsibility

Behavioral Objectives

The entire nongraded, phased system should be based upon carefully defined objectives. Objectives are available from many sources but, in the course of this project, it was felt that to be most effective, such objectives should be developed or adapted by the staff. The preliminary objectives developed are found in Appendix B of this report. Development of such objectives is a continuing process. Those displayed represent only a preliminary set. In no case should they be adopted without critical analysis. In the case of the objectives developed, no criteria of achievement have been specified. It was felt by the teaching staff who developed these objectives that a variety of measurement techniques might be applied. Such techniques were felt to be dependent upon the situation, the student and the available resources.

Summary

This chapter has presented an overview of the target school and the curriculum of that school. Several background problems in researching the program were identified. The philosophy and major objectives of the school were presented. The nongraded, phased system was explained along with the assumptions underlying it. Flow charting of illustrative program sequences was discussed along with course coding requirements. The particular problem of movement between phases was examined and several solutions set forward. Teacher viewpoints of student characteristics by phase were set forward. Behavioral objectives were discussed.

CHAPTER III

PHASE PLACEMENT RECOMMENDATIONS

In order for the nongraded, multiphased system to work efficiently, accurate phase placement recommendations were needed. The development of specialized achievement tests to be used in conjunction with other measures for initial placement and/or as a part of an information collection and feedback system at intermediate points during the school year was an important part of this project.

This chapter describes the section of the project carried out by Educational Testing Service(ETS) for the Brevard County, Florida, Public School System (Brevard). The work was accomplished during the period September 1966 through February 1970. While initial plans for the project included all of Brevard's high schools, the majority of the work was carried out in cooperation with only one, Melbourne High School, and the four junior high schools which send their graduates to it - Central, Herbert Hoover, Southwest, and Stone. This reduction in project scope was made at the request of Brevard project direction staff, and was necessitated by the fact that Brevard County high schools differed widely with respect to curricula and methods for placing students within curricula.

Melbourne High School

Melbourne High School has a student population of approximately two thousand students who would normally be considered 10th, 11th, and 12th graders. Melbourne is, however, "nongraded" and "multi-phased."[2]

---

[2] For a more detailed description, see Brown, B. Frank, The Appropriate Placement School: A Sophisticated Nongraded Curriculum. West Nyack, N.Y.: Parker Publishing Company, Inc., 1965

Each Melbourne course is offered in one or more (up to five) optional versions, or "phases." These phases may differ with respect to content, materials, rate of curriculum coverage, depth of coverage, and/or achievement levels of the students enrolled in them. (Phase 5 is most advanced, Phase 1 least advanced.) Students are allowed to select that phase of a course which they feel is most appropriate to their background, ability, interests, academic motivation, or other characteristics. Phase placement recommendations, based on prior achievement, are furnished to students at the time of Fall registration. However, freedom to select phases other than those recommended and to change phase at any time during the school year is a critical feature of the Melbourne system. This freedom is constrained only by the prohibition of underphasing oneself into remedial work or by logistic factors such as filled class sections.

Purpose of the Project

The Melbourne phasing system allows each student considerable freedom of choice, and as a consequence places upon him more than the usual burden of responsibility for making wise decisions. Acting upon the premise that the informed choice is most apt to be the best choice, the purpose of this project was to furnish to students and staff information relevant to the decisions of phase choice. Two separate but related elements were the focus of this effort: (a) the initial placement of students into phases at the time of Fall registration and (b) the development of a system of information collection and feedback at intermediate points throughout the school year. Only be combination of these two approaches could the flexibility of the Melbourne system be capitalized upon to the fullest extent.

It should be made clear that this project was not an evaluation study. It was not intended to produce data relevant to questions of the worth or effectiveness of ungraded schools or course phasing. Rather it took as its starting point the structure and function of Melbourne High School, and attempted to develop procedures for the improvement and facilitation of this structure and function. There was no attempt to control any aspect of the school environment, and in fact every effort was made to interfere as little as possible with the normal operation of the school. The project was conceived and carried out in the spirit of operations research, rather than experimental investigation.

Phase Placement Models

Three different procedures for placing students in appropriate phases were considered. The first, and perhaps most obvious, might be called the maximized payoff model. It requires, very simply, that each student be placed in that phase for which his predicted criterion score is highest. To develop this model requires a criterion common across all the phase options within a course, one or more predictors of this criterion, and separate within-phase prediction equations. Three possible results of such an analysis are shown in Figures 3-1 - 3 below.

Figure 3-1 - Phase Placement,
Parallel Regression Lines

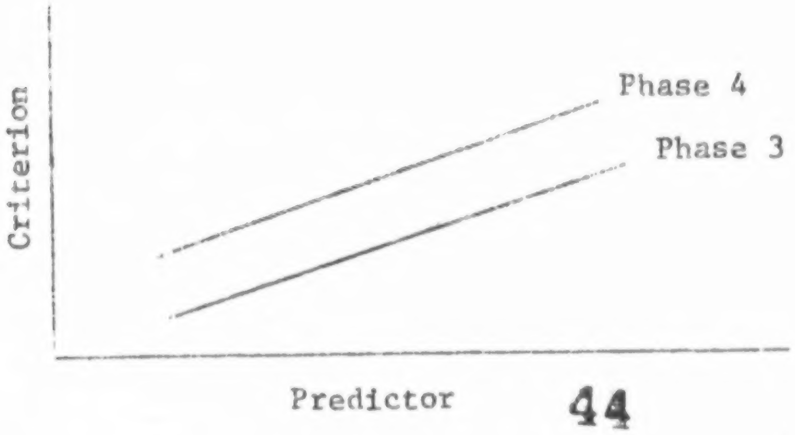


Figure 3-2 - Phase Placement,
Crossing Regression Lines

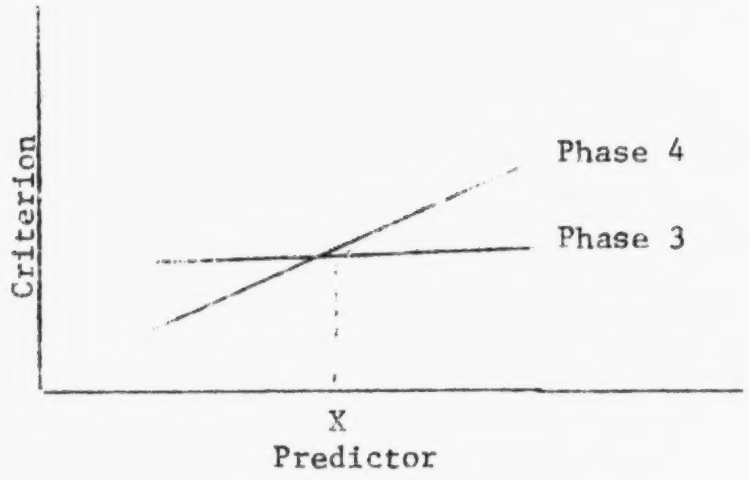


Figure 3-3 - Phase Placement, Non-Parrelel,
Non-Crossing Regression Lines

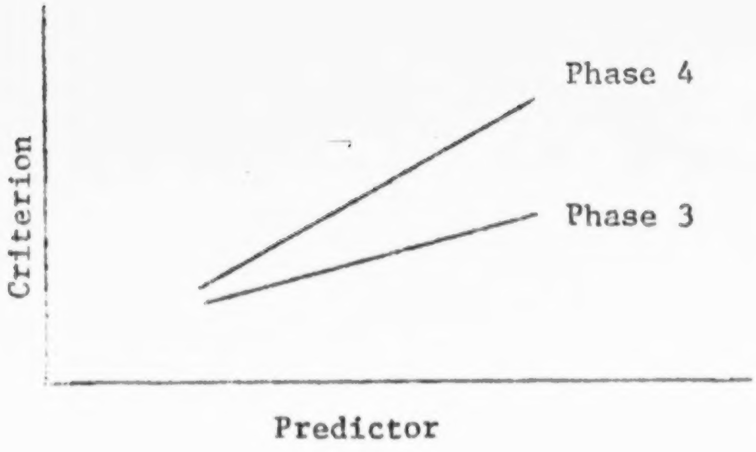


Figure 3-1 shows the situation in which, no matter what the value of the predictor, phase 4 always results in better achievement than phase 3. Such a result suggests discontinuation of the less effective phase and assignment of all students to the more effective phase. Figure 3-2 shows that phase 4 is more effective only for those students whose predictor score exceeds some cutoff, "X." Here the placement decision would be to assign all students with placement scores below "X" to phase 3, and all those above "X" to phase 4. Figure 3-3 shows a situation in which the lines are clearly not parallel, but a single phase is superior for all students for whom data are available. In this case, the placement decision would be the same as that indicated by Figure 3-1.

A second placement model to receive consideration might be called the group membership model. It assumes that the present student constitution of phase groups is meaningful, and that the placement problem is simply one of continuing to form phase groups "like these." This model does not depend upon the prediction of course achievement, and therefore does not require any end-of-course criterion measure. As does the maximized payoff model, it requires one or more predictor variables. In the group membership model, however, the function of these variables is to predict phase membership rather than course achievement. The group membership model was worthy of consideration, especially in the Melbourne High School situation, for two reasons. First, students were already being placed in homogeneous phase groups through a rational, even if somewhat informal, procedure and it is widely believed that homogeneous groups can be taught more effectively. Second, and perhaps more important, the freedom to select and shift phases allowed a corrective mechanism to operate on initial phase placements throughout the school year. By using phase membership at the end of the school year to develop placement equations, it was possible to incorporate in the group membership model some of the experience and wisdom that individual students and staff members normally gained during the year, and to provide registration recommendations based on this experience and wisdom.

The third phase placement model to be considered was one which combined features of each of the two previously mentioned. There were certain difficulties in applying each of the first two models which suggested the approach of combining aspects of both. For example, the maximized payoff model required the development of within-phase equations, but the homogeneity of existing phase groups, a result of the prior Melbourne phase placement procedures, made within-phase prediction extremely poor. However, the predictor-criterion relationships obtained using data from all phases of a course were sufficiently high to be of use. The group membership model had the disadvantage of assigning a student to a group whose members he was most like, even if his predicted achievement varied substantially from that of the group. Therefore a combined model was developed which first assigned students on the basis of group membership, but allowed modification of this initial placement if the student's predicted achievement varied markedly from the group average. A more detailed description of this model is given in the section of this report on Suggested Phase Placements.

Both the group membership and combined group membership/maximized payoff models were used in this project. In addition, as a service to Melbourne High School, phase placements based on their previous procedure were developed. A complete description of which models were applied to the various courses appears in the section on Suggested Phase Placements.

Progress Test Development

A prime requirement of a system of information feedback throughout the school year was recognized to be a set of achievement measures custom-made for the particular content of those Melbourne courses selected for study. It was necessary that these measures (hereafter called "progress tests") be appropriate across all phases (or at least as many as possible) of each course studied, in order that the resulting score scale be comparable across phases. Thus a student could interpret his score relative not only to his current phase membership, but also with respect to standards of achievement in phases to which he might consider shifting.

In March of 1967, four concurrent two-day workshops were held in Brevard County for the purpose of analyzing courses in four major subject matter areas - English, Mathematics, Science, and Social Studies. Participating in these workshops were approximately fifty representatives of three Brevard County high schools (Melbourne, Cocoa Beach, and Satellite), and an ETS test development specialist in each of the areas. The objectives of these workshops were to select a group of courses for which progress tests would be developed and to analyze the chosen courses in terms of required student behaviors and desired course outcomes.

For two days prior to the workshops, the ETS personnel visited classes in each of the three high schools in each of the four subject areas. These visits were primarily to estimate from first hand observation the ability and achievement levels of students in the various phases. This was necessary in order that the progress tests to be developed be appropriate with respect to difficulty as well as content.

As a result of the workshop discussions, the following courses were selected:

1. English (phases 2, 3, and 4)
2. Biology I (phases 2, 3, and 4)
3. American History (phases 3 and 4)
4. Mathematical Concepts (phases 1 and 2)

Although other phases were offered in certain of these courses, the phases listed above were those whose content could be appropriately covered by tests developed within the constraints of project resources.

The scope of English curriculum content spanned by phases 2, 3, and 4 proved to be too broad for adequate treatment during the two-day workshop. Therefore, a second two-day session was held in April 1967. In addition, Melbourne Biology staff and the ETS test development specialist met during the Summer of 1967 for a final review of proposed Biology test items.

Progress Tests

One of the objectives of the workshops was the identification and description of course content in terms sufficiently specific to allow the construction of custom made achievement tests. These tests were intended to assess course achievement at each of four intermediate points during the school year. Since circumstances dictated a somewhat different approach in each of the four chosen subject areas, each will be treated separately.

Math Concepts, Phase 2 "This course is designed to allow the student to attain a working knowledge of the basic mathematical operations applied to whole numbers, fractions, decimals, percents, ratio, and proportion."[3] It was decided to develop a series of four 50 item, 40 minute progress tests, to be administered at approximately equal intervals throughout the school year.[4] The four tests covered, respectively, the following topics:

---

[3] Scheuerer, Daniel T. (Ed.), Melbourne High School Curriculum Profile, 1968-1969, p. 12.

[4] Test booklets are contained in Volume II of this report.

- I - Whole Numbers
- II - Fractions
- III - Decimals and Percent
- IV - Measurement, Denominate Numbers, and Geometry

Following the first administration of these tests during the 1967-1968 school year, each was subjected to an analysis to determine the characteristics of its constituent items and of the test as a whole. Each analysis was based on all available cases, reduced by random sampling to a total N equal to the highest possible multiple of five. Statistics were obtained describing test reliability, error of measurement, difficulty, speededness, and item discrimination. These statistics are given in Table 3-1 below.

Table 3-1 - Mathematics Progress Test Characteristics

Test	N	N of Items	Mean	S.D.	Rel. (KR20)	S.E. Meas.	% Comp.[1]	% Comp. 75%[2]	Mean Δ[3]	Mean r bis
I (#30)	160	50	32.9	8.7	.89	2.8	79	98	11.1	.53
II (#31)	155	50	22.8	8.4	.86	3.1	86	98	13.4	.43
III (#32)	145	50	19.9	7.0	.81	3.1	88	96	14.1	.38
IV (#33)	160	50	13.8	4.4	.53	3.0	69	86	15.4	.22

[1] The percent of examinees completing the entire test

[2] The percent of examinees completing 75% of the test items

[3] Mean delta is an index of test difficulty. Delta is defined as the normal deviate, expressed in terms of a scale with a mean of 13 and a standard deviation of 4, which corresponds to the proportion of candidates reaching the item who answers it correctly. A low delta describes an easy item; a high delta, a difficult one. For 4-choice items (all progress tests developed for Melbourne were made up of 4-choice items), a test of middle difficulty would have a mean delta of approximately 11.7.

Inspection of Table 3-1 shows that, during the 1967-1968 school year, the Mathematics progress tests became progressively more difficult for the examinees who took them. This suggests that less class time was spent on the topics covered by the later tests, even though these topics were stated as course objectives by Melbourne Mathematics faculty at the workshops. The progressively decreasing reliabilities may indicate that the later tests are dealing with content which is unfamiliar to the examinees, or may simply be a result of the decreasing variability of the sample. Still another explanation is that the later tests are actually more heterogeneous in content.

Biology I, Phases 2-4. "Basic-phased (phase 3) Biology is based on special materials entitled Patterns and Processes adopted by the BSCS for students who may have difficulty with reading, language, and mathematics. These special materials are made up of units (ecology, evolution, cell energy processes, reproduction, genetics, and man and his environment) prepared in those areas of biology which seem most difficult."[5]

"This BSCS (Blue Version) course (phases 3 and 4) is designed for those students with average abilities in science. It is an approach in which evolutionary aspects of biology are interpreted in the light of recent advances in genetics and physiology."[6]

The above descriptions highlight a basic problem in the construction of the Biology progress tests. The differences in course objectives, content, and materials across phases are sufficiently great to preclude the development of a single test maximally appropriate to all phases. This problem was solved in the following way. For each of the first two Biology progress test administrations, three tests were developed. Of these, one was custom made for the phase 2 course, and a second for phases 3 and 4. These tests provided scores which were maximally appropriate for determining achievement within phase. The third test was based on content common to all three phases. It therefore yielded scores which were comparable across all phases. These scores, together with the local norms based on them could be used by students and staff in making decisions regarding shifts between phases 2 and 3.

---

[5] Scheuerer, Daniel T. (Ed.), op. cit., p. 5.

[6] Ibid.

It was decided at the workshops by Melbourne Biology faculty that it would be more useful to schedule all progress test administrations during the first semester. In particular, it was felt that information relevant to comparative standing across phases would be most appropriately early in the first semester. Therefore, only two progress tests were developed for each of the third and fourth administrations - one custom made for phase 2, and the other for phases 3 and 4.

Analyses were performed on the data from the 1967-1968 administrations. Table 3-2 shows the characteristics of the entire set of ten 40 minute tests.[7] It should be noted that the test used in the fourth administration for phase 2 was not specially developed for this project, since an existing instrument (Biological Science: Patterns and Processes, Achievement Test 4, published by the Psychological Corporation) was judged to be suitable. The tests custom made for phases 3 and 4 were in part constructed from item collections published by the Biological Sciences Curriculum Study and were used with the permission of that organization .

---

[7] Test booklets are contained in Volume II.

Table 3-2 - Biology Progress Test Characteristics

Test	Phase	N	N of Items	Mean	S.D.	Rel. (KR20)	S.E. Meas.	% Comp.	% Comp. 75%	Mean Δ	Mean r bis
I (#22)	2	110	30	14.6	6.0	.84	2.4	88	96	13.2	.48
I (#23)	3,4	475	30	17.0	5.0	.78	2.3	99	100	12.2	.48
I (#21)	2-4	585	30	19.4	4.6	.76	2.3	99	100	11.3	.50
II (#25)	2	100	30	16.5	5.0	.78	2.4	100	100	12.4	.45
II (#26)	3,4	455	30	15.1	4.5	.69	2.5	99	100	13.0	.39
II (#24)	2-4	575	30	18.0	4.9	.78	2.3	99	99	11.8	.51
III (#27)	2	95	30	12.6	4.0	.64	2.4	100	100	13.9	.40
III (#28)	3,4	440	30	12.1	4.9	.75	2.5	96	99	14.1	.42
IV (20	2*	81	50	22.2	6.4	.82**	3.1**	--	--	--	--
IV (#29)	3,4	445	30	16.2	4.7	.73	2.5	99	99	12.6	.43

---

* Biological Science: Patterns and Processes, Achievement Test 4

** Reliability and standard error of measurement reported by publisher, based on a sample of 740 cases, drawn from students in grades 9 through 12. This test was not item analyzed by ETS.

Melbourne faculty comments on all progress tests were obtained by questionnaire. Biology teachers indicated that most students had completed the progress tests in less than the allotted forty minutes, and this was confirmed by the item analysis data (see the % Completed column in Table 3-2). It was judged that each test could be lengthened and still retain the desired characteristic of unspeededness. Therefore, revised forms of all Biology tests (except Test IV, phase 2) were developed, consisting of the 1967-1968 form plus an additional ten items appearing in the number 31-40 positions. Table 3-3 shows the characteristic of these revised forms, which were administered during the 1968-1969 school year.

Table 3-3 - Revised Biology Progress Test Characteristics

Test	Phase	N	N of Items	Mean	S.D.	Rel. (KR20)	S.E. Meas.	% Comp.	% Comp. 75%	Mean	Mean r bis
I (#72)	2	105	40	21.2	5.9	.78	2.8	97	100	12.7	.41
I (#73)	3,4	525	40	22.8	6.3	.82	2.7	97	100	12.1	.46
I (#71)	2-4	675	40	25.4	6.2	.82	2.7	98	100	11.4	.48
II (#75)	2	110	40	21.9	6.4	.81	2.8	98	100	12.5	.44
II (#76)	3,4	550	40	20.8	6.0	.77	2.9	97	99	12.8	.40
II (#74)	2-4	690	40	24.1	6.5	.84	2.6	98	100	11.8	.50
III (#77)	2	110	40	15.6	5.6	.74	2.8	97	98	14.3	.33
III (#78)	3,4	530	40	14.8	5.1	.69	2.8	94	99	14.5	.33
IV(#79 (	3,4	510	40	21.4	5.8	.77	2.8	94	99	12.6	.40

Comparison of Tables 3-2 and 3-3 shows that the revised tests had higher reliabilities, with the exception of Test I (phase 2) and Test III (phases 3 and 4). In the case of each exception, the lower reliability may be a result of greater sample homogeneity {standard deviations for 1968-1969 scores based on the first 30 items were 4.5 for Test I (phase 2) and 4.0 for Test III (phases 3 and 4)}. The addition of ten items did not substantially affect test difficulty, but the mean item r_{bis} was reduced in several instances, indicating that some of the added items were measuring new dimensions of biology. The speededness indices were not markedly affected by the revisions, and the tests remained virtually unspeeded.

English, Phases 2-4. "Phase 2 Communication Skills concentrates on individual improvement in basic reading and communication skills. Students are guided toward vocabulary enrichment, expanded comprehension, and increased reading speed, although improved written and oral expression may naturally arise from improved reading ability."[8]

---

[8] Scheuerer, Daniel T. (Ed.), _op. cit._, pp. 18-19.

"Phase 3 English is designed to develop and improve the student's English skills in language, written and oral composition, listening, reading, and literature interpretation."[9]

"Designed for the competent student, Phase 4 English focuses on important aspects of the American character as they are revealed in our literature.... Students will also explore the structure and nature of the English language and methods of clear oral and written expressions."[10]

The English and Biology areas shared a common problem. Differences across phases were too great to allow a single progress test appropriate to all phases. Unlike Biology, however, a somewhat different solution to this problem was adopted for English. Four progress tests unique to each phase were developed, to be administered at approximately equal intervals throughout the school year. However, there was sufficient similarity among phases to allow a common core of items within tests for adjacent phases. Each test thus could be subscored to yield a score which was common also to the test for the adjacent phase. Two such subscores could be obtained for the phase 3 test - one in common with phase 2 and another with phase 4. These subscores were used as criterion data in the development of phase placement recommendations, to be described in a later section of this report. Because of their relatively small number of items, these subscores had reliabilities which were considered too low for individual score reporting.

The English tests were constructed in several separately paced sections, corresponding to bodies of subject content of major importance, as identified at the workshops. Since many of these sections were too short to yield reliable scores, some were combined to produce part scores. Table 3-4 shows the format of the English progress tests and the scores they yield.[11]

---

[9] *Ibid.*

[10] *Ibid.*

The English tests were different from progress tests in the other three areas in that they measured the development of proficiency in the same skills throughout the school year. Thus it can be noted in Table 3-4 that all four progress tests within each phase have sections bearing the same name. This is in contrast to the sequence of progress tests in each of the other three subject areas, which cover different material as the year progresses. For this reason, it was judged that the fourth English progress test in each phase could also serve as an end-of-course test. The selection of end-of-course tests in Biology, Mathematics, and American History will be discussed in a later section of this report. Analyses were performed on the data from the 1967-1968 administrations. Tables 5 and 6 show the characteristics of the entire set of twelve 40 minute English tests.

---

[10] Ibid.

[11] Test booklets are contained in Volume II.

Table 3-4 - English Progress Test Formats

Test	Phase	Section	Items	Time	Score
I (#34)	2	Spelling	20	5'	Items 1-20 (Part I)
		Language	5	5')	
		English Expression	20	15')	Items 21-60 (Part II)
		Reading	15	15')	
II (#37)	2	Spelling	20	5'	Items 1-20 (Part I)
		Language	10	10')	
		English Expression	20	10')	Items 21-65 (Part II)
		Reading	15	15')	
III (#40)	2	Spelling	20	5'	Items 1-20 (Part I)
		Language	10	10')	
		English Expression	15	10')	Items 21-60 (Part II)
		Reading	15	15')	
IV (#43)	2	Spelling	20	5'	Items 1-20 (Part I)
		Language	15	10')	
		English Expression	15	10')	Items 21-65 (Part II)
		Reading	15	15')	
I (#35)	3	Spelling	20	5'	Items 1-20 (Part I)
		Language	5	5')	
		English Expression	20	15')	Items 21-65(Part II)
		Literature	20	15')	
II (#38), III (#41)	3	Spelling	20	5'	Items 1-20 (Part I)
		Language	10	10')	
		English Expression	20	10')	Items 21-65 (Part II)
		Literature	15	15')	
IV (#44)	3	Spelling	20	5'	Items 1-20 (Part I)
		Language	15	10')	
		English Expression	20	10')	Items 21-70(Part II)
		Literature	15	15')	
I (#36)	4	Language	10	10')	
		English Expression	20	10')	Items 1 -55 (Total)
		Literature	25	20')	
II (#39)	4	Language	10	10')	
		English Expression	25	15')	Items 1-55(Total)
		Literature	20	15')	
III (#42)	4	Language	15	15')	
		English Expression	20	10')	Items 1-50 (Total)
		Literature	15	15')	
IV(#45)	4	Language	20	15')	
		English Expression	20	10')	Items 1-55 (Total)
		Literature	15	15')	

Table 3-5 lists characteristics of the parts of the English progress tests for which scores were reported. It should be noted that the Part I reliabilities are not low for a part consisting of only twenty items and requiring only five minutes of testing time. Table 3-6 below lists speededness, difficulty, and mean item discrimination indices for each section (see Table 3-4) of the same tests. In interpreting the speededness indices, it should be noted that they refer to paced sections. That is, each section was separately timed, but examinees were allowed to proceed immediately to the next section if they completed the preceding section before the announced time limit.

Table 3-5 - English Progress Test Characteristics, By Part

Test	Phase	Part*	N	N of Items	Mean	S.D.	Rel. (KR 20)	S.E. Meas.
I	2	I	390	20	7.6	2.8	.52	1.9
		II	390	40	19.2	5.1	.72	2.7
I	3	I	855	20	8.8	3.0	.54	2.1
		II	855	45	20.2	5.0	.64	3.0
I	4	Total	375	55	28.4	6.3	.73	3.3
II	2	I	230	20	9.9	3.4	.67	2.0
		II	230	45	22.0	7.7	.86	2.8
II	3	I	910	20	10.0	3.4	.66	2.0
		II	910	45	26.5	6.6	.81	2.9
II	4	Total	325	55	36.8	6.3	.78	3.0
III	2	I	280	20	12.4	3.5	.72	1.9
		II	280	40	20.5	6.2	.80	2.8
III	3	I	920	20	13.4	3.4	.70	1.9
		II	920	45	25.3	6.8	.82	2.9
III	4	Total	320	50	33.6	6.3	.79	2.9
IV	2	I	280	20	11.4	3.8	.75	1.9
		II	280	45	21.7	6.9	.82	2.9
IV	3	I	885	20	13.7	3.4	.71	1.9
		II	885	50	24.2	6.8	.80	3.1
IV	4	Total	305	55	33.5	7.0	.80	3.1

*See Table 3-4, "Score" column for definition

Table 3-6 - English Progress Test Characteristics By Section

Test	Phase	Section	N	N of Items	% Comp.	% Comp.75%	Mean Δ	Mean r bis
I	2	Spelling	390	20	95	99	14.4	.40
		Language	390	5	99	99	12.6	.40
		English Expression	390	20	99	99	14.4	.29
		Reading	390	15	98	99	11.9	.46
I	3	Spelling	855	20	92	96	13.7	.38
		Language	855	5	99	99	14.0	.26
		English Expression	855	20	98	99	.4.0	.32
		Literature	855	20	92	98	13.0	.30
I	4	Language	375	10	99	99	12.8	.34
		English Expression	375	20	97	99	13.3	.31
		Literature	375	25	90	98	12.5	.34
II	2	Spelling	230	20	93	97	13.0	.46
		Language	230	10	90	94	13.1	.50
		English Expression	230	20	98	99	13.7	.40
		Reading	230	15	83	92	11.9	.59
II	3	Spelling	910	20	98	99	13.1	.46
		Language	910	10	98	99	12.8	.36
		English Expression	910	20	99	99	12.4	.40
		Literature	910	15	95	99	10.9	.49
II	4	Language	325	10	99	100	11.5	.32
		English Expression	325	25	99	99	11.0	.39
		Literature	325	20	98	99	10.6	.41
III	2	Spelling	280	20	95	99	11.6	.52
		Language	280	10	95	98	12.7	.40
		English Expression	280	15	99	99	13.6	.36
		Reading	280	15	96	99	12.2	.48
III	3	Spelling	920	20	99	99	11.1	.51
		Language	920	10	98	99	12.3	.34
		English Expression	920	20	99	99	12.8	.44
		Literature	920	15	94	99	11.6	.49
III	4	Language	320	15	98	99	11.5	.40
		English Expression	320	20	99	99	10.6	.47
		Literature	320	15	98	100	10.8	.37
IV	2	Spelling	280	20	98	99	12.1	.53
		Language	280	15	93	99	14.1	.28
		English Expression	280	15	99	99	13.6	.39
		Reading	280	15	96	99	11.9	.57
IV	3	Spelling	885	20	99	99	10.9	.53
		Language	885	15	96	98	13.3	.35
		English Expression	885	20	99	99	13.3	.40
		Literature	885	15	97	99	12.9	.42
IV	4	Language	305	20	99	100	11.5	.41
		English Expression	305	20	99	100	11.9	.36
		Literature	305	15	96	99	11.8	.40

American History, Phases 3 and 4. Phase 3 "... is designed to help students become more fully aware of America's social, economic and political development. Particular emphasis is given to the individual's responsibility of citizenship in a democratic society. Special attention is given to the following: The American Constitution, Diplomatic History, Industrialization, Growth of Capitalism, Sectionalism vs. Nationalism, Social and Intellectual Change, and a required six weeks' study of Communism."[12]

Phase 4, "... centered around problems in American History, utilizes a thorough investigation and analytical approach to causal factors of significant occurrences in the continuum of the nation's history. Quest study and research techniques receive maximum emphasis."[13]

The workshop sessions with Brevard American History faculty brought to light a serious problem. Instructional approaches of individual teachers to the same course, within as well as across phases, differed greatly. In fact, there was serious question whether any set of progress tests could be appropriate to such a wide range of instructional practices. It was therefore decided to select progress tests which would stress the application of knowledge in generalizing principles and concepts. The Cooperative Topical Tests in American History were judged to meet this requirement. The entire battery includes eight tests, organized chronologically from exploration and colonization to the present. The tests were scheduled to be administered in pairs, at approximately equal intervals throughout the 1967-1968 school year. In fact, however, only the first four tests were administered:[14]

---

[12] Scheuerer, Daniel T. (Ed.) op. cit., p. 1.

[13] Scheuerer, Daniel T. (Ed.) op. cit., p. 2.

Test I - Exploration, Colonization, and Independence, 1450 - 1783

Test II - Foundations of American Government, 1781 - 1801

Test III - Growth of Nationalism and Democracy, 1801 - 1840

Test IV - Expansion, Civil War, and Reconstruction, 1840 - 1877

By the time the above four tests had been administered, it was apparent from faculty evaluation of the tests that they considered them to be inappropriate. In addition to the course content differences noted at the workshops, there also were serious differences among teachers with regard to the rate, sequence, and emphasis which characterized their treatment of various topics. It was therefore decided not to administer the remaining four tests in the series, and not to administer any American History progress tests during the 1968-1969 school year.

Since the selected History progress tests were part of a standardized battery, the characteristics of which were already known, it was decided not to perform item analyses on these tests. Table 3-7 shows the statistical characteristics reported in the publisher's manual for the four tests administered.[15]

Table 3-7 - American History Progress Test Characteristics

Test	N	N of Items	Mean	S.D.	Rel. (KR 20)	S.E. Meas.	% Comp.	% Comp. 75%	Mean r bis
I	265	60	42.5	9.3	.89	3.1	99	100	.51
II	260	60	36.8	10.3	.89	3.4	94	98	.44
III	260	60	38.4	10.9	.91	3.2	98	99	.53
IV	225	60	43.7	9.7	.90	3.0	99	100	.53

---

[14] Test booklets are contained in Volume II

[15] Handbook for Cooperative Topical Tests in American History. Cooperative Test Division, Educational Testing Service, Princeton, N. J., 1965, p. 25.

Table 3-8 shows means and standard deviations for the administrations of these tests to Melbourne students during the 1967-1968 school year. Comparison of these means to those reported in Table 3-7 lends some support to the judged inappropriateness of these tests for Melbourne American History students, especially at the phase 3 level.

Table 3-8 - American History Progress Test Means and Standard Deviations - Melbourne Population

Test	Phase	N	Mean	S.D.
I	3	436	26.4	7.3
	4	53	36.6	8.1
II	3	430	22.8	6.9
	4	47	31.3	8.0
III	3	394	23.2	8.1
	4	47	29.4	6.0
IV	3	405	26.4	8.5
	4	49	33.8	7.9

Item Analyses. Detailed information regarding the numbers and achievement levels of examinees choosing each option of each progress test item is presented in Appendix C.

End-Of-Course Tests

In addition to the custom made progress tests, it was decided to select an existing standardized end-of-course test in each subject area (as described previously, the final progress test for each of English phases 2-4 served also as an end-of-course test). These tests covered the total material presented in these classes during the school year, although they were of necessity less specifically appropriate to Melbourne curricula. The tests selected by ETS test development specialists were:

BSCS Comprehensive Final Examination, Form J. Published for the Biological Sciences Curriculum Study by the Psychological Corporation, New York, N. Y., 1966.

American School Achievement Tests, Form D, Advanced Battery, Part II, Arithmetic Computation and Arithmetic Problems. Published by Bobbs-Merrill Company, Inc., Indianapolis, Indiana, 1955.

Cooperative Social Studies Tests, American History (Senior High School), Form A. Published by Educational Testing Service, Princeton, N. J., 1965.

Table 3-9 shows the characteristics of these end-of-course tests. Reliabilities are those reported by the publishers.

Table 3-9 - End-of-Course Test Characteristics

Test	Form	N of Items	Time Limit	Scores	Rel.	Type of Rel.
BSCS Comprehensive	J	50	45'	Total	.82	KR20
American School Ach. Test	D	43	35'	Arith. Comp.	.80	Correlation between parallel forms
		24	25'	Arith Comp.	.73	Correlation between parallel forms
Coop. Amer. Hist. (Sr. High)	A	70	40'	Total	.90	KR20

The selected end-of-course tests were appropriate for all phases within Biology, Mathematics, and American History respectively. The test administrations in each area were conducted near the end of the second semester.

Score Reports and Local Norms

It was judged desirable to evaluate thoroughly the characteristics of the newly developed progress tests before making scores available to students and faculty. Therefore, score reports during the 1967-1968 school year were not furnished for several months following the various test administrations. They were therefore of minimal use to students and staff. However, score reporting during 1968-1969 was accomplished promptly, for use on an optional basis by Melbourne faculty and students. Score reports were sent to the local project director, and were presumably made available to teachers and students. Certain score reports were withheld for financial reasons, but these delays came late in the second semester and probably had little effect.

Local (Melbourne) norms were developed by phase for all progress and end-of-course tests. Raw scores were reported by class roster to Melbourne in both 1967-1968 and 1968-1969, and could be converted to percentile ranks by reference to the appropriate local norms table. These tables are contained in Appendix C. In those situations where a common test across phases was administered, students could determine not only their standing within phase but also with respect to students in adjoining phases. In order to guard against over-interpretation of scores, users were provided with an index number for each progress test and advised to consider each score as being somewhere within the range created by adding and subtracting this index number from the reported score. In effect, this meant that individual scores were reported as bands of plus and minus one standard error of measurement around the obtained score.

Suggested Phase Placements

Progress test scores supplied students with feedback upon which to base their phase change decisions during the 1968-1969 school year. However, the school had available to it additional data which could be used to develop suggested phase placements for students at the time of Fall 1968 registration. Melbourne High School utilized an open course registration of the college type. Prior to the 1968-1969 school year, the school had provided students with suggested phase placements in four general areas--English, Mathematics, Science, and History. These phase placements were derived from the results of achievement tests administered during the Spring. If, for example, placement was to be made among four available phases, each student achievement score was classified according to the national norms quartile range into which it fell. Placement was then suggested for the corresponding phase. The instruments used for this procedure were the Stanford Achievement Test battery for Fall 1967 placement and the Sequential Tests of Educational Progress for Fall 1966 placement. Placement in each area was based on data from a single test, chosen on the basis of judged relevance to the area.

A new system of placement was sought which would make use of more information about each student than a single achievement test score, and which would utilize the relationships of these predictor data to an objective criterion of success common to all phases of a given course. Since Melbourne faculty did not have departmental exams, the selected end-of-course tests served as criterion measures in three of the four courses chosen for study--Biology I, American History, and Mathematical concepts (see Table 3-9). In English, the progress tests were so spaced that the fourth one was administered at the end of the second semester and served as the end-of-course criterion measure.

As noted above, differences among phases within English were sufficiently great to preclude the use of a single criterion instrument across all phases into which placement was desired. However, it was possible to embed overlapping sets of items in the instruments for adjacent phases, thus producing a subscore common to phases two and three, and another common to phases three and four. These subscores were used as the criterion measures.

In addition to the end-of-course criterion measures, a short satisfaction questionnaire was developed and administered concurrently with each progress and final test. This questionnaire consisted of four items concerned with student attitudes toward particular courses, phases, the subject regardless of course and phase, and the marks received. However, item intercorrelations were low and prediction of the satisfaction total score was poor. Therefore, the satisfaction variable was not used as a criterion in the development of phase placements.

The sending junior high schools for Melbourne High School had, for some years prior to the 1967-1968 school year, participated in the Florida Ninth Grade State Testing Program. This battery was examined, and it was concluded that it would serve well as the nucleus of a set of predictor instruments. It comprised the following tests:

> School and College Ability Test, Form 3B, published by Educational Testing Service, Princeton, N. J., 1957: Verbal, Quantitative and Total scores
>
> Metropolitan Achievement Tests, Advanced Battery, Form EM, published by Harcourt, Brace and World, Inc., New York, 1961: Reading, Language, Arithmetic Computation, Arithmetic Problem Solving and Concepts, Social Studies Information, and Science

This battery was administered statewide each Fall through 1966 (a new battery was adopted in Fall 1967) to all ninth grade students, and scores were thus available in time to develop predictions for Sophomore phase placements the following Fall and subsequent high school years.

In addition to these academic ability and achievement measures, it was decided to include in the predictor battery measures of student interest in various subject matter areas. The instrument chosen for this purpose was the Academic Interest Measures (AIM), published by Educational Testing Service,[16] which yields interest scores for biological sciences, English, fine arts, mathematics, social sciences, secretarial, physical sciences, foreign languages, music, engineering, home economics, and executive. This instrument was administered to all ninth grade students in the sending junior high schools in the Spring preceding their entry into Melbourne High School.

Phase placement recommendations were developed for eleven different subject matter areas (see Figure 3-4). In American History (phases 3 and 4) and English (phases 2-4) a two stage decision rule was employed. The first stage involved determination of the degree to which each student was similar to those who had been enrolled in the various phases in the past. This degree of likeness was determined in terms of the predictor variables described previously. The second stage involved the prediction of an end-of-course criterion score for each student, using the same predictor variables. A multiple decision rule was applied in order to combine the two predictions (phase membership and criterion score):

1. Assign for each student that phase for which he is most like previous student enrollees (at the end of the school year) except that--
2. If a student's predicted criterion score falls below the mean score of the next lower phase, or above the mean of the next higher phase, the phase placement will be altered down or up one phase accordingly. Alteration of more than one phase in either direction will not be allowed.

---

[16] See Halpern, G. "Development of An Interest Test: Academic Interest Measures." Research Memorandum, 66-13. Educational Testing Service, Princeton, N. J., 1966.

Figure 3-4 - Phase Placement Form

EDUCATIONAL TESTING SERVICE

GRAD 1971
FROM CENTRL JR HS

MELBOURNE HIGH SCHOOL FALL 1968 REGISTRATION

AT THE BOTTOM OF THIS PAGE ARE SUGGESTED PHASE PLACEMENTS FOR SEVERAL SUBJECTS. YOU MAY ENTER EITHER A HIGHER OR LOWER PHASE THAN THE ONE SUGGESTED, WITH THE EXCEPTION THAT IF YOUR RECOMMENDED PHASE IS 3 OR HIGHER, YOU MAY NOT ENROLL IN PHASES 1 OR 2 FOR THAT SUBJECT.

PLEASE BEAR IN MIND THAT THESE SUGGESTED PHASE PLACEMENTS ARE NOT PERFECT. THEY ARE ONLY ONE OF THE THINGS YOU SHOULD CONSIDER IN CHOOSING THE BEST PHASE FOR YOU.

THE NUMBER FOLLOWING EACH COURSE IS THE SUGGESTED PHASE PLACEMENT. IF A PHASE IS RECOMMENDED IN A COURSE YOU HAVE ALREADY TAKEN, PLEASE DISREGARD IT. AN ASTERISK (*) INSTEAD OF A NUMBER INDICATES THAT THERE WAS NOT ENOUGH INFORMATION TO ESTIMATE A PHASE PLACEMENT FOR YOU IN THAT COURSE. IN SUCH CASES, SEE THE COUNSELOR STAFF FOR HELP IN PLANNING YOUR SCHEDULE.

ENGLISH	3
AMERICAN HISTORY	2
ALGEBRA I	4
ALGEBRA II	3
PLANE GEOMETRY	3
CHEMISTRY I	3
BIOLOGY I	3
BIOLOGY II	3
PHYSICAL SCIENCE (OTHER THAN CHEMISTRY I)	2
MATH. (OTHER THAN PLANE GEO. AND ALG. I/II)	4
HISTORY (OTHER THAN AMERICAN HISTORY)	3

This procedure had the advantage of capitalizing upon the experience of previous students in placing themselves in appropriate phases, yet allowed for modification in cases where the probability of extremely deviant achievement in either direction was great.

The technique of multiple group discriminant analysis was used to predict phase membership.[17] Discriminating functions were developed, separately for males and females, using data from students enrolled during the 1967-1968 school year. Phase membership was determined at the end of the year, in order that the predictions would reflect the outcomes of the natural phase selection process which took place throughout the school year. Such a selection process could occur only under the conditions of free choice characteristic of a school like Melbourne High School.

Since the number of available predictors was quite large, it was desirable to reduce the number actually used for each prediction, in order both to prevent excessive degradation of the precision of prediction for subsequent groups of students, and to obviate the necessity of collecting large amounts of data in subsequent years.

All test data were initially examined (separately by sex) with the expectation that most variables would not be useful, but that the useless variables might obscure the functional variables in the first multivariate tests. For this reason, all available data were analyzed initially, with little note being given to the multivariate F ratios. Attention was centered upon the univariate statistics and the predictive efficiency of each single variable. Even when the multivariate F test suggested that no significant prediction was available, a few of the variables sometimes had significant univariate F ratios. Thus, at the first attempt to predict, all variables were used and that single variable with the largest univariate F ratio was selected, provided that the univariate F had a probability of less than .05. This initially selected variable was then treated as a covariate and the discriminant analysis was rerun.

---

[17] See Rao, C. R., Advanced Statistical Methods in Biometric Research. New York: Wiley and Sons, 1953, pp. 257 ff.

Of the remaining variables, that one with the largest univariate F ratio having a probability of less than .05 was selected. This variable was then added to the first as a covariate and the analysis rerun.

Successive variables were selected, successive covariate analyses were performed, and variables added to the set of useful predictors until none of the remaining variables had a univariate F with a probability of less than .05. The final set of useful predictors constituted the reduced battery. The final phase prediction discriminant function was determined by rerunning the analysis using only the selected variables. The multivariate F ratios obtained from this analysis described the usefulness of the selected variables in predicting phase. The procedure is a generalization of the Wherry-Doolittle method of battery reduction in multiple correlation.

Because academic interest (AIM) data were not available for substantial numbers of students, two sets of discriminant functions for each sex were developed--with and without interest scores as predictor variables. The availability of AIM data determined which function was used for each student.

The second stage of the placement decision rule employed for American History and English involved the prediction of final test scores. Standard techniques of multiple regression were used. The Wherry-Doolittle battery reduction procedure was directly applicable, and was followed without modification.[18] As in the development of discriminant functions, two sets of regression equations for each sex were developed and used for students with and without academic interest scores.

Examination of within-phase scatterplots of the various predictor variables versus the criterion revealed that predictability of final test score within phase was rather low. Because the predictor and criterion means varied systematically across phases, prediction for the total group was considerably better. For this reason, a common regression equation across phases within course was employed.

In Biology I, Plane Geometry, Algebra I, Algebra II, Chemistry I, English (phase 5 only), and American History (phase 2 only), phase placements were developed on the basis of group membership alone (stage one of the previously described decision rule). In the case of each course except Biology I, this was necessary because no common criterion measure existed. Although a final test for Biology I was selected and administered, the data were not in usable form at the required time and were not used in the placement process. Techniques of battery reduction and phase prediction were identical to those described for English (phases 2-4) and American History (phases 3 and 4).

For Mathematics (other than Plane Geometry, Algebra I, and Algebra II), phases 1-5; History (other than American History), phases 2-5;

---

[18] See Garret, H. E., Statistics in Psychology and Education. New York: David McKay Co., 1966.

Biology II, phases 2-5; and Physical Science, phases 1-5, the procedure used by Melbourne High School to develop phase placements for the Fall 1967 registration was duplicated. For each course offered in four phases, each student score on a designated Stanford Achievement Test was classified according to the national norms quartile range into which it fell, and placement was recommended in the corresponding phase. For courses offered in five phases, the scores were classified by national norms quintile ranges and phase placement recommendations were developed in similar manner.

Progress tests were developed and a final test was selected for Mathematical Concepts. Although these measures were administered and scores were reported, no phase placement recommendations were developed because this course was offered at only one phase level (phase 2) during the 1967-1968 school year.

Tables 3-10 and 3-11 give multivariate F ratios and discriminant function coefficients for the various reduced predictor batteries.

The interest variables which were of use in predicting phase membership in English (males and females), American History (males only), and Chemistry (males only), are shown in Tables 3-10 and 3-11. An interesting situation arose in Algebra I and II, where the Metropolitan Language test was the only predictor retained in the reduced battery for males, while the Metropolitan Arithmetic Problems test was retained for females. A possible explanation for this phenomenon might lie in the greater expectations or pressures for higher education focused on males. The Metropolitan Language test is probably a good general ability measure. It may well be that the higher ability, college destined males

Table 3-10 - Reduced Predictor Batteries: Discriminant Function Coefficients and Multivariate F Ratios for Males

		Without AIM			With AIM		
			Disc. Func. Coeff.			Disc. Func. Coeff.	
Course	Phase	Predictors	f_1	f_2	Predictors	f_1	f_2
English	2-5	Metropolitan Read.	-.03	1.22	Metropolitan Read.	.05	1.41
		Metropolitan Social Studies	.34	.02	SCAT Verbal	.47	-.48
		SCAT Verbal	.43	-.30	SCAT Mathematical	.56	-.66
		SCAT Mathematical	.49	-.85	AIM English	.28	-.23
		F=24.21(12,929); Pr<.001			F=18.61(12,744); Pr<.001		
American History	2-4	Metropolitan Social Studies	.70	--	Metropolitan Social Studies	.53	--
		SCAT Mathematical	.49	--	SCAT Mathematical	.58	--
		F=31.54(4,350); Pr<.001			AIM English	.34	--
					F=19.57(6,268); Pr<.001		
Biology I	2-4	Metropolitan Language	-.13	1.25	No AIM Variables In Reduced Battery		
		Metro. Arith. Problems	.58	-.27			
		Metro. Science	.68	-.57			
		F=23.89(6,466); Pr<.001					
Plane Geometry	3-4	Metro. Arith. Problems	--	--	No AIM Variables In Reduced Battery		
		F=15.83(1.41); Pr<.001					
Algebra I	2-4	Metro. Language	--	--	No AIM Variables In Reduced Battery		
		F=6.09(2,32); Pr=.006					
Algebra II	3-4	Metro Language	--	--	No AIM Variables In Reduced Battery		
		F=18.39(1,84); Pr<.001					
Chemistry I	3-4	SCAT Verbal	--	--	SCAT Verbal	.86	--
		F=7.70(1.71); Pr=.007			AIM Engineering	-.64	--
					F=5.19(2,64); Pr=.008		

Table 3-11 - Reduced Predictor Batteries: Discriminant Function Coefficients and Multivariate F Ratios for Females

		Without AIM			With AIM		
			Disc. Func. Coeff.			Disc. Func. Coeff.	
Course	Phase	Predictors	f_1	f_2	Predictors	f_1	f_2
English	2-5	Metro. Reading	-.10	1.33	Metro. Reading	-.01	1.35
		Metro. Language	.46	.35	Metro Language	.49	.11
		Metro Social Studies	.42	-.51	Metro Social Studies	.35	-.44
		SCAT Verbal	.30	-.62	SCAT Verbal	.23	-.52
		SCAT Mathematical	.19	-.57	SCAT Mathematical	.15	-.63
		F=20.57(15,895); Pr<.001			AIM Social Studies	.29	.08
					F=16.93(18,756); Pr<.001		
American History	2-4	Metro. Arithmetic Problems	.69	.87	No AIM Variables In Reduced Battery		
		SCAT Verbal	.53	.21			
		SCAT Mathematical	-.11	-1.50			
		F=23.41(6,308); Pr<.001					
Biology I	2-4	Metro. Language	.77	-.62	No AIM Variables In Reduced Battery		
		Metro. Arithmetic Problems	.37	.04			
		Metro. Science	-.06	1.15			
		F=7.15(6,466); Pr<.001					
Plane Geometry	3-4	Metro. Language	.63	--	No AIM Variables In Reduced Battery		
		SCAT Mathematical	.62	--			
		F not available					
Algebra I	2-4	Metro. Arithmetic Problems	--	--	No AIM Variables In Reduced Battery		
		F=14.66(2,29 ; Pr<.001					
Algebra II	3-4	Metro Arithmetic Problems	--	--	No AIM Variables In Reduced Battery		
		F=27.38(1,66); Pr<.001					
Chemistry I	3-4	Metro Social Studies	--	--	No AIM Variables In Reduced Battery		
		F=11.68(1,32); Pr=.002					

feel they must choose the higher phases in Algebra I and II, regardless of their mathematics achievement levels. The females, under less pressure, are free to phase themselves on the basis of more suitable criteria.

Tables 3-12 and 3-13 give zero order and multiple correlation coefficients for the various multiple regression reduced predictor batteries. Note that only courses with end-of-course criterion instruments are included.

Table 3-12 - Multiple Regression Reduced Preditor Batteries: Zero Order and Multiple Correlation Coefficients for Males

		Without AIM		With AIM	
Course	Phase	Predictors	r	Predictors	r
English	2-3	Metro. Reading	.63	No AIM Variables	
		Metro. Language	.60	In Reduced Battery	
		R = .68			
English	3-4	Metro. Language	.61	No AIM Variables	
		SCAT Verbal	.61	In Reduced Battery	
		SCAT Mathematical	.55		
		R = .68			
American History	3-4	Metro. Social Studies	.74	Metro. Social Studies	.70
		SCAT Mathematical	.58	SCAT Mathematical	.56
		R = .77		AIM English	.28
				R = .68	

Table 3-13 - Multiple Regression Reduced Predictor Batteries: Zero Order and Multiple Correlation Coefficients for Females

		Without AIM		With AIM	
Course	Phase	Predictors	r	Predictors	r
English	2-3	Metro. Language	.64	No AIM Variables	
		Metro. Arith. Problems	.54	In Reduced Battery	
		R = .68			
English	3-4	Metro. Language	.62	Metro. Language	.60
		SCAT Verbal	.58	SCAT Verbal	.61
		R = .67		AIM Social Studies	.24
				R = .69	
American History	3-4	Metro. Social Studies	.70	Metro. Social Studies	.69
		SCAT Mathematical	.50	SCAT Mathematical	.49
		R = .73		AIM Foreign Language	.37
				R = .73	

Inspection of Tables 3-12 and 3-13 shows that interest variables were retained in the reduced batteries for American History (males and females), and English (females only). There seemed to be few systematic differences between males and females in terms of achievement variables retained in the reduced predictor batteries. Application of a standard shrinkage formula[19] to the obtained multiple correlations shows that correlations of virtually equal magnitude might be expected in similar student samples.

Effectiveness of Phase Placements

As stated earlier, the study carried out by ETS was more in the spirit of operations research than experimental research. It represented an attempt to improve the information available to students and staff of Melbourne High School in order that they might make better decisions with respect to initial phase placement and subsequent phase shifting. The study was carried out under the usual operating conditions of the school, with no attempt to exert experimental control over any of the forms of information feedback. As described previously, phase placement predictions were developed using final test data from the 1967-1968 school year, and these equations were used to provide phase placement recommendations for the 1968-1969 school year. Although progress tests were administered during 1967-1968, detailed analysis of test and item characteristics had to be performed before it could be determined that these newly constructed instruments were appropriate and useful to the groups for whom they were constructed. For this reason, progress test scores were purposely not reported to the school during 1967-1968 until far later than the time at which they could have had any effect upon student decisions to shift phase. Thus, with the exception of the administration (but not reporting) of the progress and final tests, the 1967-1968 school year at Melbourne High School was unaffected by the activities of the study. Therefore, the introduction in Fall 1968 of a partially new system of generating phase placement recommendations, plus the impact of progress test scores reported to students and staff throughout the 1968-1969 school year, might be expected to have had considerable impact upon the incidence and kinds of phase shifting behavior.

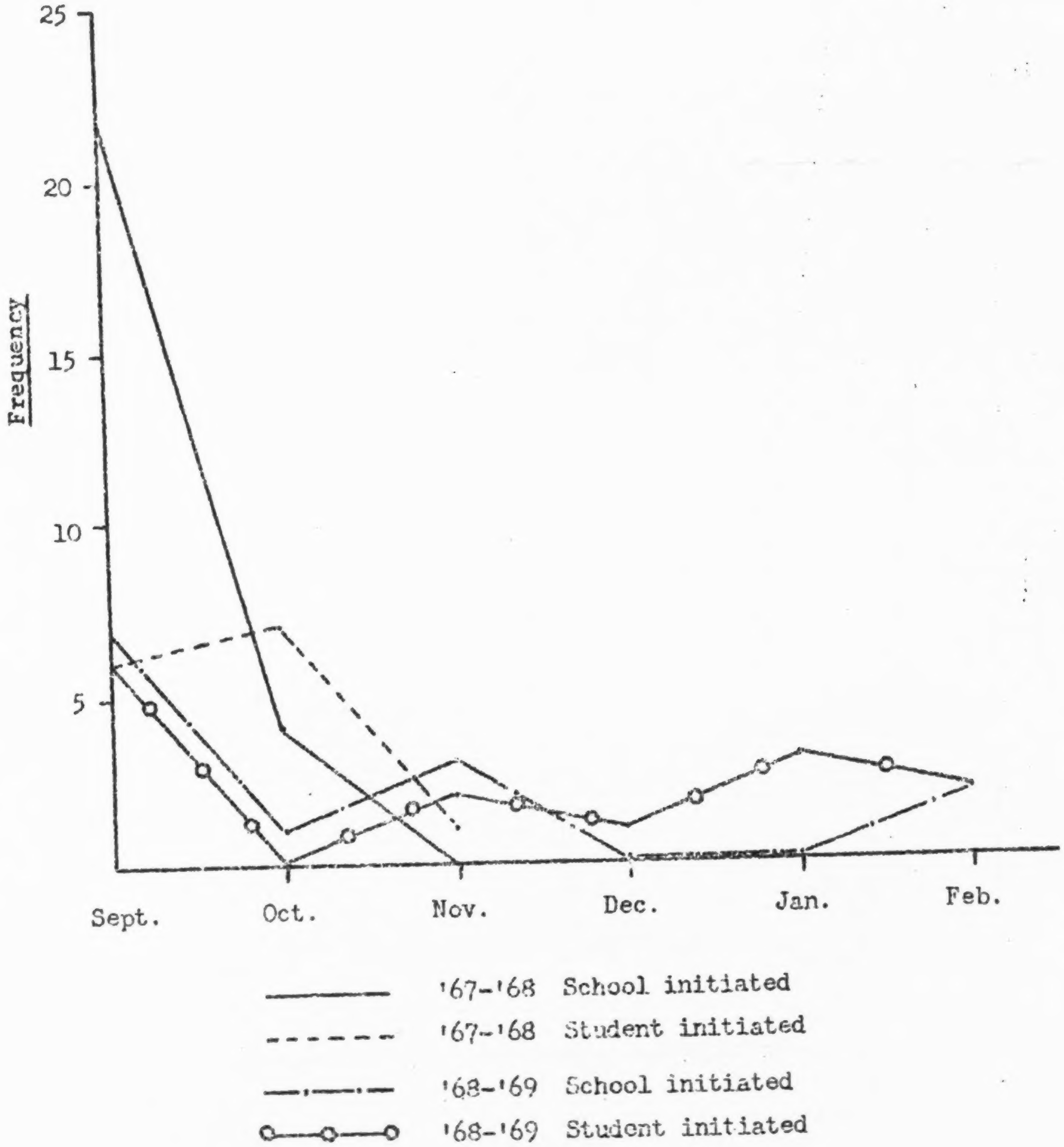
---

[19] See Guilford, J. P., Fundamental Statistics in Psychology and Education. N. Y.: McGraw-Hill Book Company, Inc., 1956, p. 399.

During both the 1967-1968 and 1968-1969 school years, records were kept of phase shifting within the courses for which progress tests were developed--Biology I, English, American History, and Mathematical Concepts. The initiator (school or student) of each phase shift was also recorded. Figures 3-5 to 3-9 show the data for both years, separately by course and combined. Shifts between two classes of the same phase are not included, since they were considered not to represent a true curricular change.

The results shown in Figures 3-5 to 3-9 are at most suggestive, and the urge to overinterpret them must be strongly resisted. Although the emphasis of this project was on information feedback, there were many other influences acting upon students in Melbourne High School during the 1967-1968 and 1968-1969 school years. It would be difficult for someone familiar with the local situation to suggest additional factors which might be responsible for changes in phase shift behavior between the two years. Differences in the student body, faculty, administration, and curriculum all might be expected to have effects, which would be confounded with the

Figure 3-5 Phase shift frequencies for 1967-1968 and 1968-1969 - Biology I



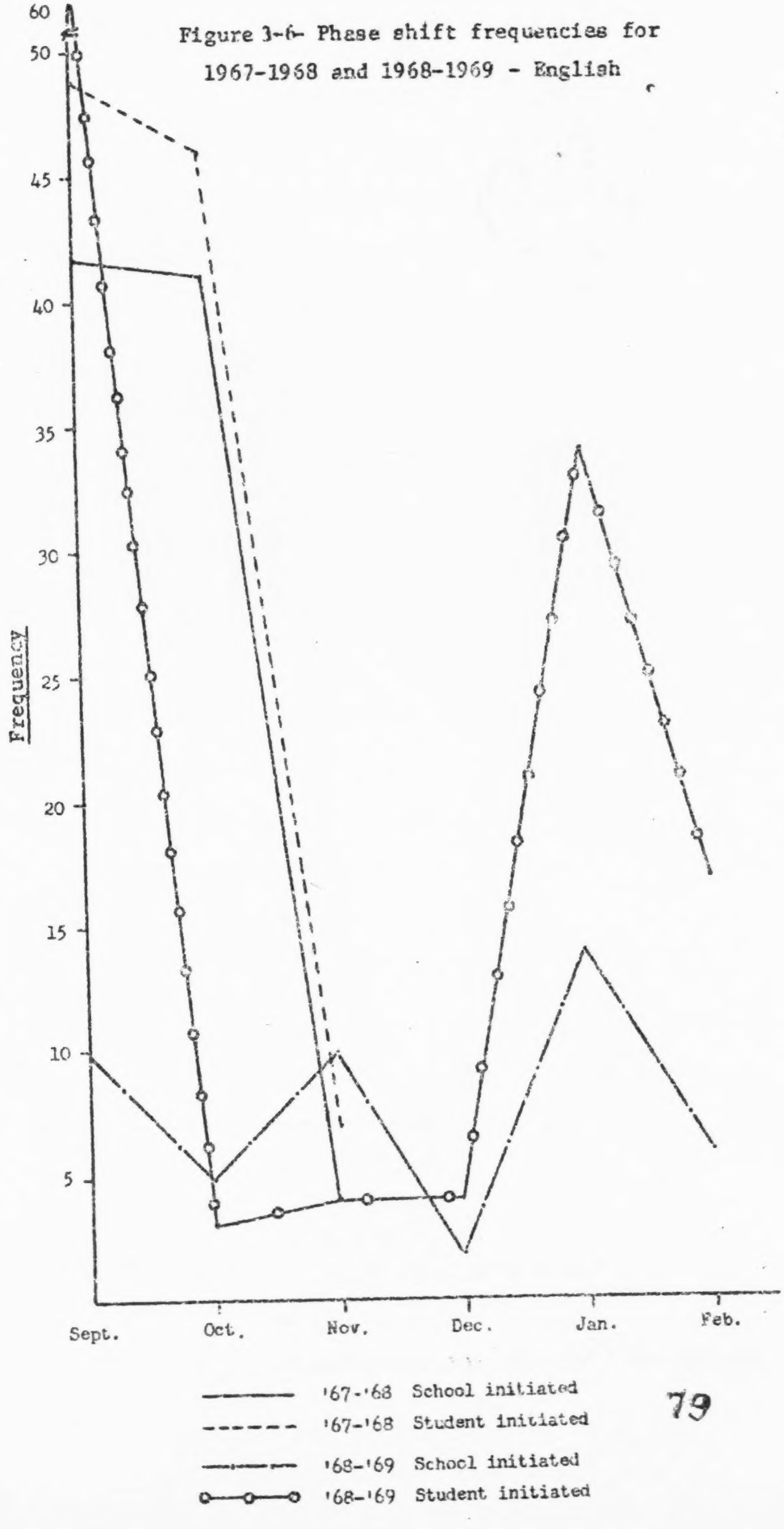


Figure 3-6- Phase shift frequencies for 1967-1968 and 1968-1969 - English

Figure3-7- Phase shift frequencies
for 1967-1968 and 1968-1969 - American History

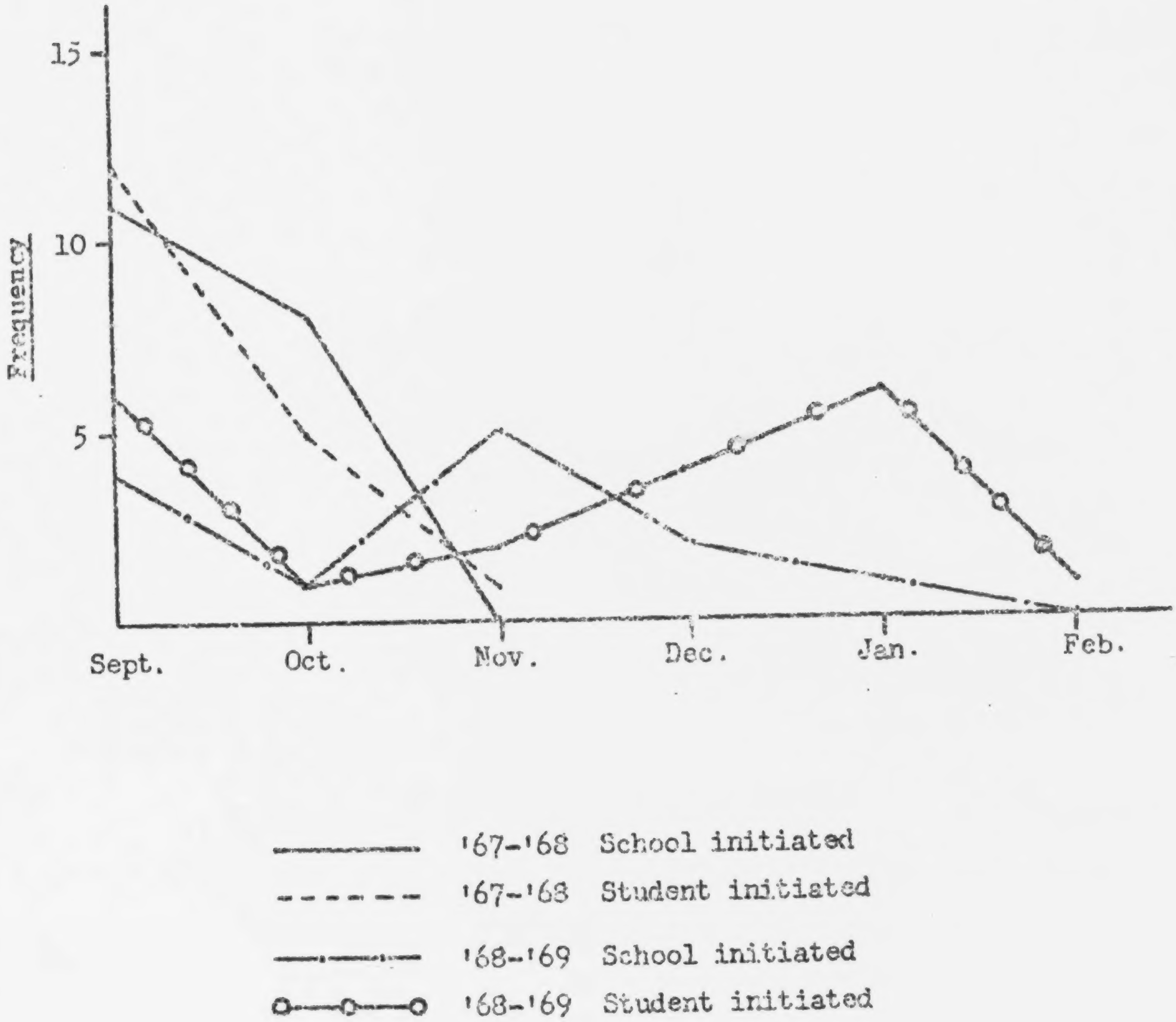
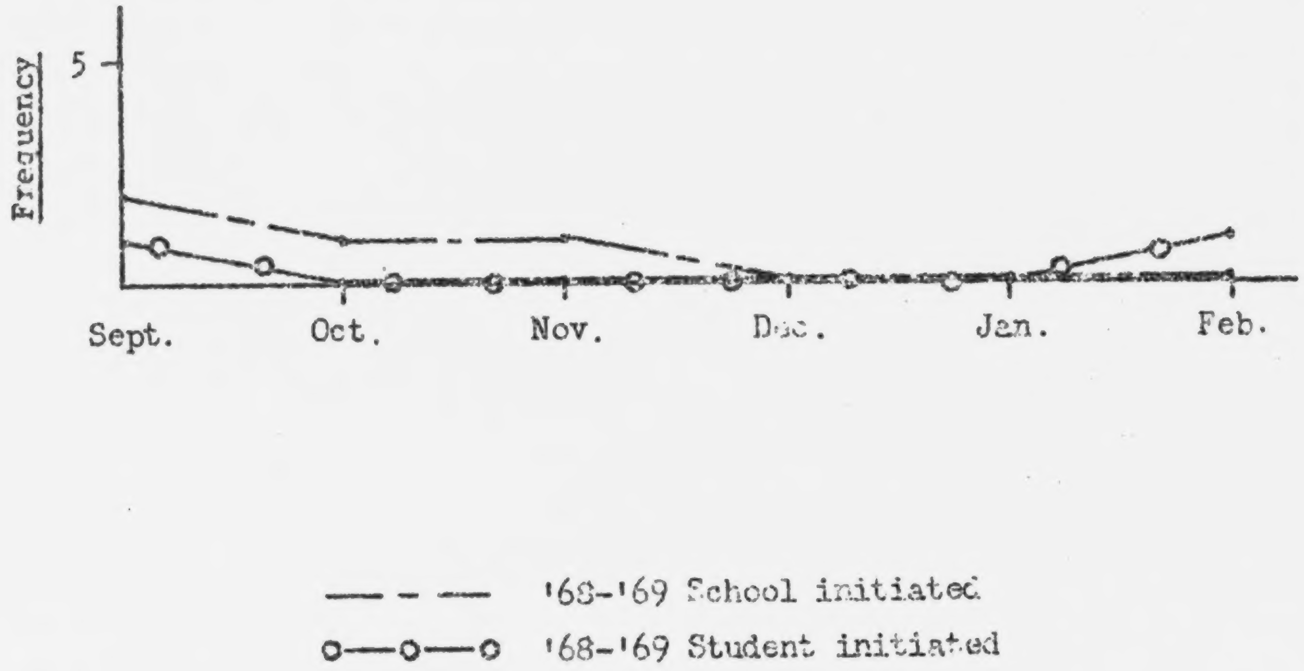
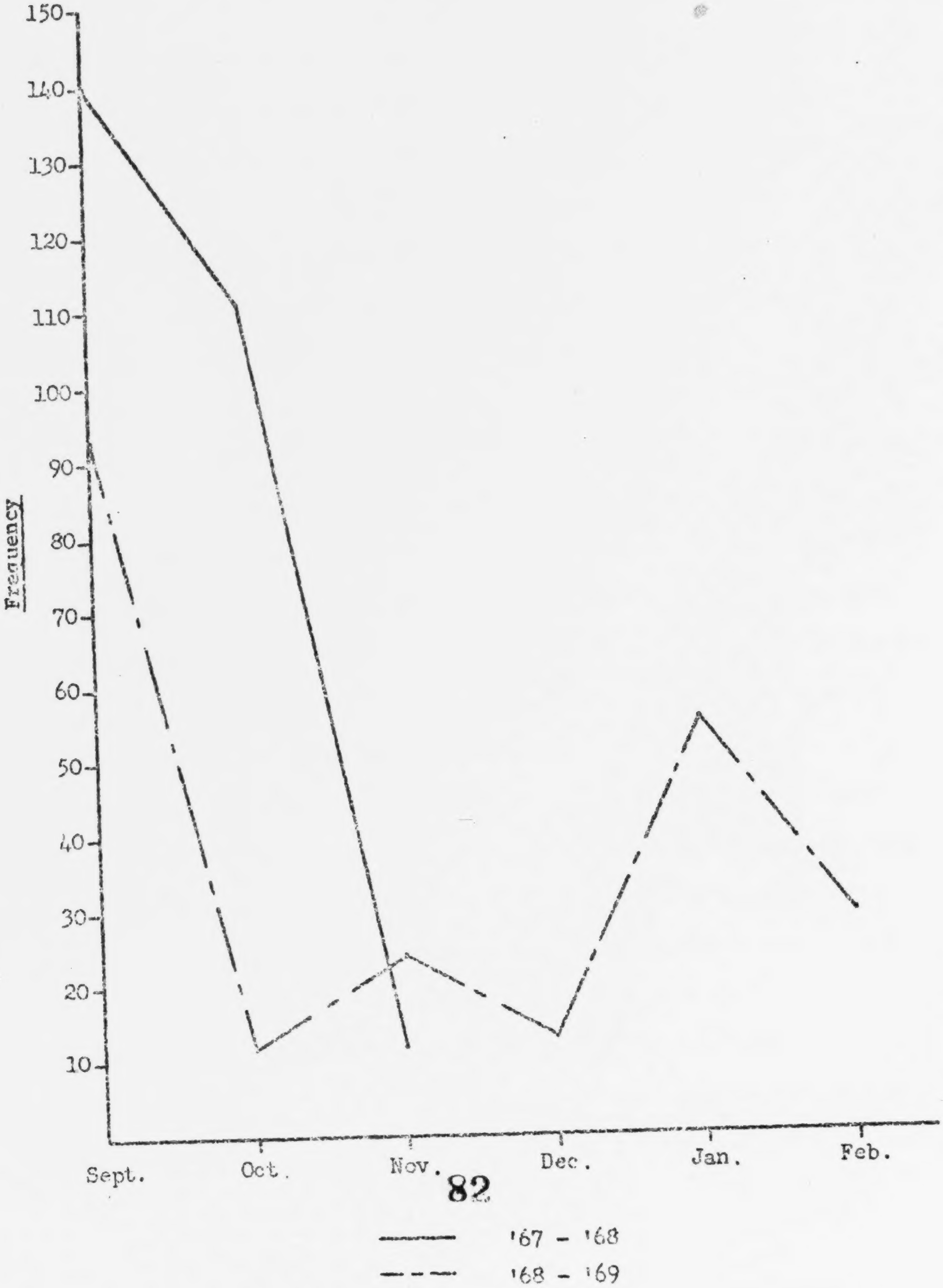


Figure 3-8- Phase shift frequencies
for 1968-1969 - Mathematical Concepts



Note: Only one phase of Mathematical Concepts was offered during 1967-1968, and therefore no phase shift could occur during that year.

Figure3-9 - Phase shift frequencies for 1967-1968 and 1968-1969 - combined across course and initiator



possible effects of the information feedback procedures. The following comments on the obtained phase shift data should be considered in this light.

Comparative data for the two years are available only for the months of September, October, and November, since Melbourne reported that there were no phase shifts after November in 1967-1968. Figure 3-9 shows that the total number of phase shifts for September-November was clearly smaller during 1968-1969, as had been hypothesized. The general pattern of frequent shifts at the beginning of the first semester followed by a sharp decline, with a moderate increase at the beginning of the second semester, is characteristic of most of the 1968-1969 individual course graphs. Mathematical Concepts, which exhibited virtually no phase shifts at all, was the single exception. Examination of the progress test means for Mathematical Concepts reveals that the two phases were almost identical with respect to achievement. It therefore seems reasonable that little phase shifting occurred, since there was perhaps little difference between the phases and the students perceived this.

Relative to the numbers of students enrolled, there was little difference among the four courses in either year with respect to phase shift frequency. In September of 1967, the percentages of enrollees who shifted phase in Biology, English, and American History were 5%, 6% and 5% respectively. In September of 1968, the corresponding percentages were 2%, 4%, and 2% in Mathematical Concepts.

Inspection of Figures 3-5 to 3-7 (Biology I, English, and American History) reveals some interesting characteristics but few consistencies. In 1967-1968, both school and student initiated phase shifts show marked declines in frequency between September and November. In 1968-1969, a slight upward trend in November was evidenced in all three courses. Student initiated phase shifts predominated in all three courses during the second semester of 1968-1969, perhaps suggesting that students were making use of test information. The large number of student (relative to school) initiated shifts in English during September 1968 could not be related to progress test results, but might be a result of school administrative procedures.

Other evidence of phase placement effectiveness may be found in the degree to which students accepted (and faculty approved) the suggested placements at the time of registration. Records were kept of individual Fall 1968 registrations in each of the eleven courses for which suggested phase placements were provided. Table 3-14 shows that, overall, the majority (56%) of students accepted suggested placements, and that overphasing (24%) was more frequent than underphasing (14%). Note that percentages do not add to 100% because only phase selections differing from the recommended phase by one are tabulated. The remaining percentage represents phase selection deviations of more than one from the recommendation, in either direction.

The overall order of accept-phase, overphase, and underphase holds for Sophomores, Juniors, and Seniors. However, it is most pronounced for Sophomores, and becomes less pronounced as year in school increases. In comparing phase registration behavior across courses, it should be remembered that, for the first seven courses listed in Table 3-14, the course designations have the same meaning regardless of year in school, since Melbourne High School is ungraded. However, the last four "courses" listed are really subject areas, which include a variety of courses both within and across year in school. Thus their meaning is not specific, particularly across year in school.

Table 3-14 - Fall 1968 Registration Percentages

	Sophomores			Juniors			Seniors			Total		
	%	%+	%-	%	%+	%-	%	%+	%-	%	%+	%-
English	64	22	12	55	31	11	47	36	1	56	29	11
American History	50	44	2	44	48	5	52	42	3	49	45	3
Biology I	67	15	17	57	28	12	48	38	14	64	19	16
Plane Geometry	85	9	6	90	4	6	88	13	0	88	7	5
Algebra I	48	27	23	49	33	13	56	13	0	49	29	19
Algebra II	71	16	13	77	13	10	80	4	16	75	13	12
Chemistry I	76	2	5	68	8	23	71	6	11	62	6	17
Mathematics (other than Plane Geometry, Alg. I, Alg. II)	31	53	5	34	26	25	50	8	34	41	23	25
History (other than Am. Hist.)	57	14	16	40	11	33	39	15	34	42	13	31
Biology II	50	14	29	50	15	27	48	38	11	49	29	18
Physical Science	41	36	11	38	16	26	35	12	40	37	18	30
Total	61	25	11	57	23	15	48	22	20	56	24	14

% = percent of students receiving phase placement recommendations who registered for the phase recommended

%+ = percent of students receiving phase placement recommendations who registered for the phase one higher than that recommended

%- = percent of students receiving phase placement recommendations who registered for the phase one lower than that recommended

For each of the first seven courses listed in Table 3-14, the overall order of accept-phase, overphase, and underphase is duplicated. Examination of the cell entries for each of these courses indicates that, in most cases, the same result obtains within each year in school. In the case of the last four subject areas listed in Table 3-14, the accept-phase category contains a majority of the cases, but the overphase-underphase relationship shows no clear pattern. This is probably due in part to the non-specificity of these categories mentioned previously.

Summary and Recommendations for Further Research

The two principal elements of the project were the development of custom made achievement tests ("progress tests") in three subject areas, and the provision of phase placement recommendations to Fall 1968 registrants in eleven subject areas. Both of these project elements contributed to the overall project goal of providing students and staff with information relevant to the decisions of phase choice.

Curriculum differences among Brevard County high schools were in part responsible for the decision to limit the project to a single school. Melbourne High School was selected as the project school by Brevard County personnel. It should be emphasized that the effectiveness of developed materials and procedures was studied for that school alone. Additional research is necessary before the developed phase placement procedures can be extended to other schools.

Sets of progress tests were developed to measure attainment of course objectives in Biology, Mathematics, and English. Progress tests were not developed in American History because of extreme diversity among Melbourne American History teachers with respect to methods, materials, and course objectives. American History tests selected for administration in Melbourne were not well received by teachers, and their use was discontinued midway through the first project year. The experience in Melbourne emphasized the fact that before a system of information feedback similar to that developed in this project can be implemented, there must exist some degree of curricular consensus at the classroom level. Although additional workshops might help teachers to achieve this, they cannot create consensus where in fact it does not exist.

Three methods of developing suggested phase placements were employed in this project. Two were newly developed, and the third had been in use by Melbourne High School for some time. The choice of method to use for each subject area was dependent upon what data were available. All three methods were demonstrated to be feasible. Because differences among placement methods were completely confounded by differences among courses, it was not possible to assess the relative effectiveness of the three methods. To untangle the effects of "course" and "placement method" would require a design in which randomly selected subsets of students within each course received placement recommendations developed by different methods. This degree of experimental control was judged to be contrary to the project philosophy of interfering as little as possible with the functioning of the school. Such a procedure remains a possibility for further research, however.

Data descriptive of student registration and phase shift behavior were gathered and analyzed. A majority of students did register in phases suggested for them. Again, it was not possible to assess the effects of various information feedback elements upon phase shifting behavior without substantially controlling (and perhaps distorting) the normal operation of the school.

In Fall 1967, the content of the predictor test battery (Florida Ninth Grade State Testing Program) was completely altered. In order to obtain predictor scores for Sophomores entering Melbourne High School in

Fall 1968, the former battery, in addition to the new battery, was administered in Fall 1967. It was planned to develop prediction equations during the 1968-1969 school year based on the data from the new battery. Because the necessary contractual agreement was not reached, these new prediction equations were not developed. Neither of the two newly developed phase placement methods was used by Melbourne High School for its Fall 1969 registration. Neither of the methods can be used until the necessary data analyses are performed. The system of information feedback was conceived from the beginning as a continuing, self-correcting process. It requires periodic data analysis to determine the extent to which existing procedures are still relevant to a changing student body and a changing curriculum. Without a continuing supportive research effort, the system might soon become a useless anachronism.

The role of the progress tests in the information feedback system was largely an informal one. Scores and interpretive materials were provided to the school, but were not used to develop updated phase placement recommendations. Further research is needed to determine the usefulness of progress test scores in modifying initial phase placement recommendations on the basis of current course achievement. If progress test data prove to be effective in this regard, the data analysis procedures developed in this project could be used to provide students with updated phase placement recommendations at several points throughout the school year.

CHAPTER IV

ADMINISTRATIVE CONTROL ELEMENTS:

Administrative Roles and Student Information Systems*

Information used in this section of the report was obtained in the Spring semester of 1969 from available written materials and extensive interviews with students, teachers, and administrators of Melbourne High School. An attempt has been made to describe Melbourne High School as it is presently organized and as it presently functions with little or no attention given to the developmental history of the school nor to the socio-political conditions existing in Brevard County. This report suggests some organizational changes from the standpoint of increasing the efficiency of internal operations. The question of implementation strategy, however, is left to the responsible local persons plus whatever outside help they might seek.

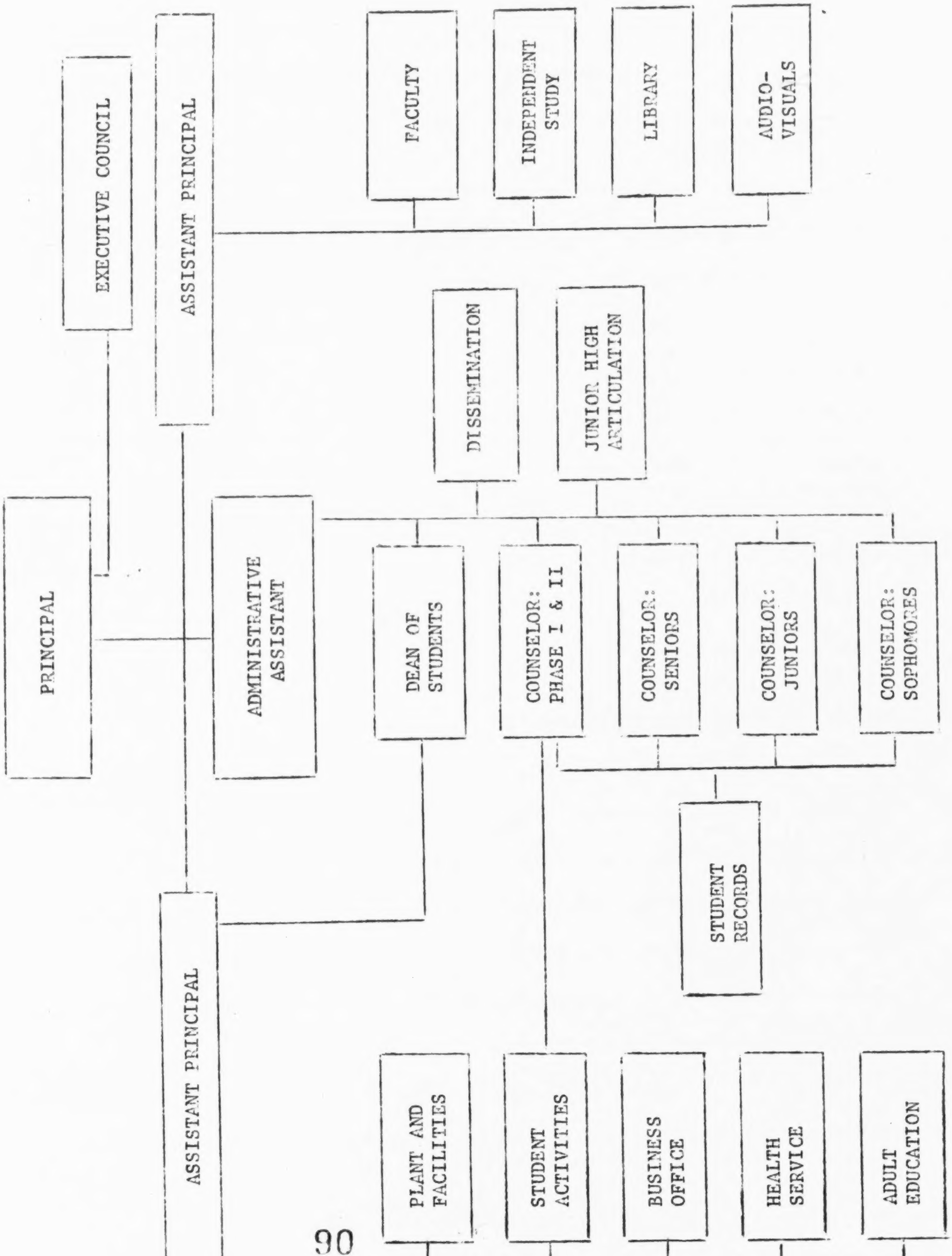
Role Delineations of Administrative Staff

In this section of the report are listed the major responsibilities of each administrative officer as they were described in the interviews previously mentioned. The chain of command can probably be seen more clearly in the organizational chart on the following page than from the verbal description that follow. The descriptions are intended to specify the activities and the responsibilities of each person as they are presently conceived and functioning.

---

* This section of the report was largely prepared by Dr. Bertram Spector, New York Institute of Technology, with the assistance of Dr. Robert Jones and Mr. Ernest O'Dierno.

PRESENT ORGANIZATIONAL CHART OF MELBOURNE HIGH SCHOOL


PRINCIPAL
EXECUTIVE COUNCIL
ASSISTANT PRINCIPAL
FACULTY
INDEPENDENT STUDY
LIBRARY
AUDIO-VISUALS
ADMINISTRATIVE ASSISTANT
DISSEMINATION
JUNIOR HIGH ARTICULATION
DEAN OF STUDENTS
COUNSELOR: PHASE I & II
COUNSELOR: SENIORS
COUNSELOR: JUNIORS
COUNSELOR: SOPHOMORES
STUDENT RECORDS
ASSISTANT PRINCIPAL
PLANT AND FACILITIES
STUDENT ACTIVITIES
BUSINESS OFFICE
HEALTH SERVICE
ADULT EDUCATION

The Executive Council was included in this section because it serves a communication function from the students and faculty to the administrators.

Principal

1. Chief administrator of the school.
2. Responsible to the Superintendent.
3. Interprets School Board policies, along with the Superintendent for the operation of the school.
4. Represents the school to parents, social agencies, and the community at large.
5. Plans for the total operation of the school including budgeting and the allocation of resources.
6. Evaluates administrative staff and those teachers going on continuing contracts.
7. Makes final decision on hiring of new personnel or discharging of present personnel.
8. Participates in planning and other county-wide activities with the central staff of the Superintendent's office.
9. Verifies all reports to the Superintendent as well as those to the outside agencies such as the State Department of Education.

Administrative Assistant to the Principal

1. Carries out specific tasks for which responsibility has been delegated by the Principal.
2. Serves as Director of Dissemination including responding to general correspondence relating to the program and arranging to meet the requests of visitors in so far as possible.
3. Functions as the Coordinator of Guidance in terms of establishing the general nature of the program. Also serves as the counselor to students who are prospective college students, especially during the students' senior year.
4. Coordinates articulation with the junior high schools to prepare those students for admission to Melbourne High School.
5. Assists with student disciplinary cases involving personal matters with female students.

Vice Principal of Administration

1. Supervises the operation of the physical plant.
2. Supervises the operation of the business office.
3. Works with the Dean of Students on the more serious discipline problems.
4. Assists in problems involving teacher-student conflicts.
5. Works with parents of students, especially in the case of discipline problems.
6. Supervises student activities.
7. Assists in evaluation of teachers for promotion and tenure.
8. Director of Adult Education program of evening studies.
9. Carries out specific tasks for which responsibility has been delegated by the Principal.

Vice Principal of Academic Programs

1. Helps teachers identify behavioral objectives for courses.
2. Works with teachers on the content of courses and the development of new courses.
3. Works with groups of teachers as well as individuals to help improve instruction in the classroom.
4. Coordinates all academic programs including independent studies.
5. Provides general supervision for library.
6. Provides general supervision for audio-visual center.
7. Screens new teacher applications.
8. Assigns teachers to courses and to teams.
9. Supervises teacher trainees serving on internships.
10. Coordinates in-service training programs for teachers.
11. Evaluates teacher performance for promotion and tenure.
12. Coordinates special programs and grants of an academic nature.
13. Carries out specific tasks for which responsibility has been delegated by the Principal.

Coordinator of Independent Studies

1. Defines the program of Independent Studies in collaboration with the Vice Principal of Academic Programs.
2. Disseminates information about the program to faculty and students.
3. Coordinates assignment of students to preceptors and monitors each project for progress.

Dean of Students

1. Enforces school rules concerning attendance and discipline.
2. Functions as a part of the Guidance Department but works closely with the Vice Principal of Administration.

Counselor of Seniors

1. Works with twelfth grade students.
2. Helps some students with college selection, although most of this work is done by the Administrative Assistant to the Principal.
3. Checks student records to be sure they meet graduation requirements.
4. Processes requests for phase changes.

Counselor of Juniors

1. Works with eleventh grade students.
2. Keeps student records up to date.
3. Processes requests for phase changes.
4. Registers new students during the year.

Counselor of Phase 1 and 2 Students

1. Works with all students, regardless of grade, who are in Reading Phase 1 or Communications Phase 2.
2. Maintains Student Activities Calendar for Vice Principal of Administration. Required to be on campus at night when clubs meet.
3. Serves 1½ hours cafeteria duty one day a week.

Executive Council

The Council is the formal mechanism by which recommendations can be made to the administration from the faculty, counseling staff, and student body. The Council is composed of one teacher from each subject matter area (department), one guidance counselor, and the President of the Student Council.

Functioning of the Present System

Interviews with the persons who now hold the above described positions plus interviews with several teachers and students provided information which suggests that, although Melbourne High School offers a program with considerably more flexibility than most high schools, maximum efficiency has yet to be reached in terms of matching students with program opportunities. Some characteristics about the way in which the system is presently functioning indicate areas of possible change. If appropriate alternatives could be implemented, the operation of the program could be smoother resulting in increased efficiency with efficiency being defined as providing the maximum opportunity for each student to work at his own level in each subject matter area.

The major set of problems centers around the placement of students in the present system of organizing the curriculum into phases. Apparently, the five tracks (phases) are not enough to give the homogeneous groups they desire as evidenced by the further splitting of Phase 3 into segments A and B. The student volitional method of choosing phases also tends to reduce the homogeneity of the groups. Phasing of students is accomplished primarily by past performance and teacher evaluation, although student choice can generally override those factors. Phase Prediction Examinations have been developed for a portion of the curriculum.

Some teachers and counselors reported that a few of the students take advantage of the phasing system in a negative way. Some students who believe they are going to fail a particular class will attempt to phase into another one where they hope there are better chances for a higher grade. Apparently some teachers would argue that such activities are the way in which students find their most appropriate level of working while other teachers would say that such practices encourage quitting when the going gets tough. Also, some students drop one class and manage to wait several days before signing up or reporting to the new class. That this can happen appears to result from the overload of paper work of the counselors as they process the phase change requests and maintain the student records manually.

There is some question whether phasing up is as feasible as phasing down. The higher phases cover subject matter at a greater depth and have a tendency to move faster, thereby placing a great burden upon the student who dares to phase up after the beginning of the semester.

Perhaps the greatest bottle neck in the implementation of the phasing system is in processing the paper work. As it now sdtands, students request a phase change from their counselors who have the responsibility of getting permission from the teacher of the class being dropped and the teacher of the class being added, plus checking to see what the change will mean to the student in terms of graduation requirements. The counselors for sophomores, juniors, and seniors now appear to function essentially as clerks who process student registration and phase change requests.

Specifications for an Automated Student Information System

The need for an automated student information system was documented in the previous section of this report. The establishment of such a system with the capability of monitoring student progress within courses as well as toward graduation, and to process phase change requests would be the single most important change that could be made to facilitate the operation of the phasing system at Melbourne High School.

Development of an automated student information system to carry out the function of record keeping would be a simple programming task. Similarly, the function of phase changing and the function of checking graduation requirements would be relatively easy. Before the system could monitor progress within courses, however, the behavioral objectives of each course would have to be fixed and a series of progress achievement tests constructed. The work of the Educational Testing Service has provided a start toward such a network of tests. Once all of the tests are in use, a reliable Phase Prediction System could be generated to suggest to students the probable consequence of selecting any of the phase alternatives.

The automated student information system would need the following capabilities:

Registration of New Students in the 10th Grade

1. Indicate to each student the requirements for graduation.
2. Indicate to each student the courses available.
3. Indicate to each student the available options of phasing, grading system (Satisfactory - Unsatisfactory, A-B-C-D-F, and Pass - Fail Agreement), and teachers.
4. Indicate to each student his phase predictions and the information upon which the predictions were based, e.g., past grades, achievement tests, ability tests, and other special tests or information.

5. Accept student choices.
6. Print out master schedule based upon student choices.

Registration of Continuing Students at the Beginning of a Semester

1. Scan the permanent record of each student and indicate to him the remaining requirements for graduation.
2. Indicate to each student the courses not already successfully completed.
3. Same as for 10th grade.
4. Same as for 10th grade.
5. Same as for 10th grade.
6. Same as for 10th grade.

Requests for Phase Changes or Class Changes Within a Phase

1. Accept the request for phase or class change including the specific reason for the request.
2. Check and report to student whether or not the requested class meets a graduation requirement.
3. Check and report to the student if the requested class is available to the student. If the answer is "no", state the reason, e.g., class full, student has already taken the course, student does not meet entrance requirements, etc.
4. If answers to 2 and 3 above are "yes", or if student chooses an elective rather than a required course, check and report to the student concerning permission of the teacher of the class being dropped and of the teacher of the class being added.

Suggested Organizational Structure for Incorporating an Automated Student Information System

While the New York Institute of Technology provided for the computer programming necessary for the implementation of an automated student information system, the necessity for adding to the Melbourne High School staff at least one data processing person was obvious. Additional persons to fill the capacities of Key Punch Operator and Clerical Assistant would also be needed in the near future. These persons could be added to the present administrative staff without any organizational changes.

Ultimately a new organizational structure would be advisable in order to more efficiently cluster the functions of the administrators. The job descriptions could then be more easily specified in a manual for succeeding persons. That each person brings special skills and competencies to a position which tend to modify the job description over time is not denied. Neither, however, should the organization be dependent upon the uniquenesses of its administrators to the extent that the functions could not be identified and job descriptions spelled out in writing.

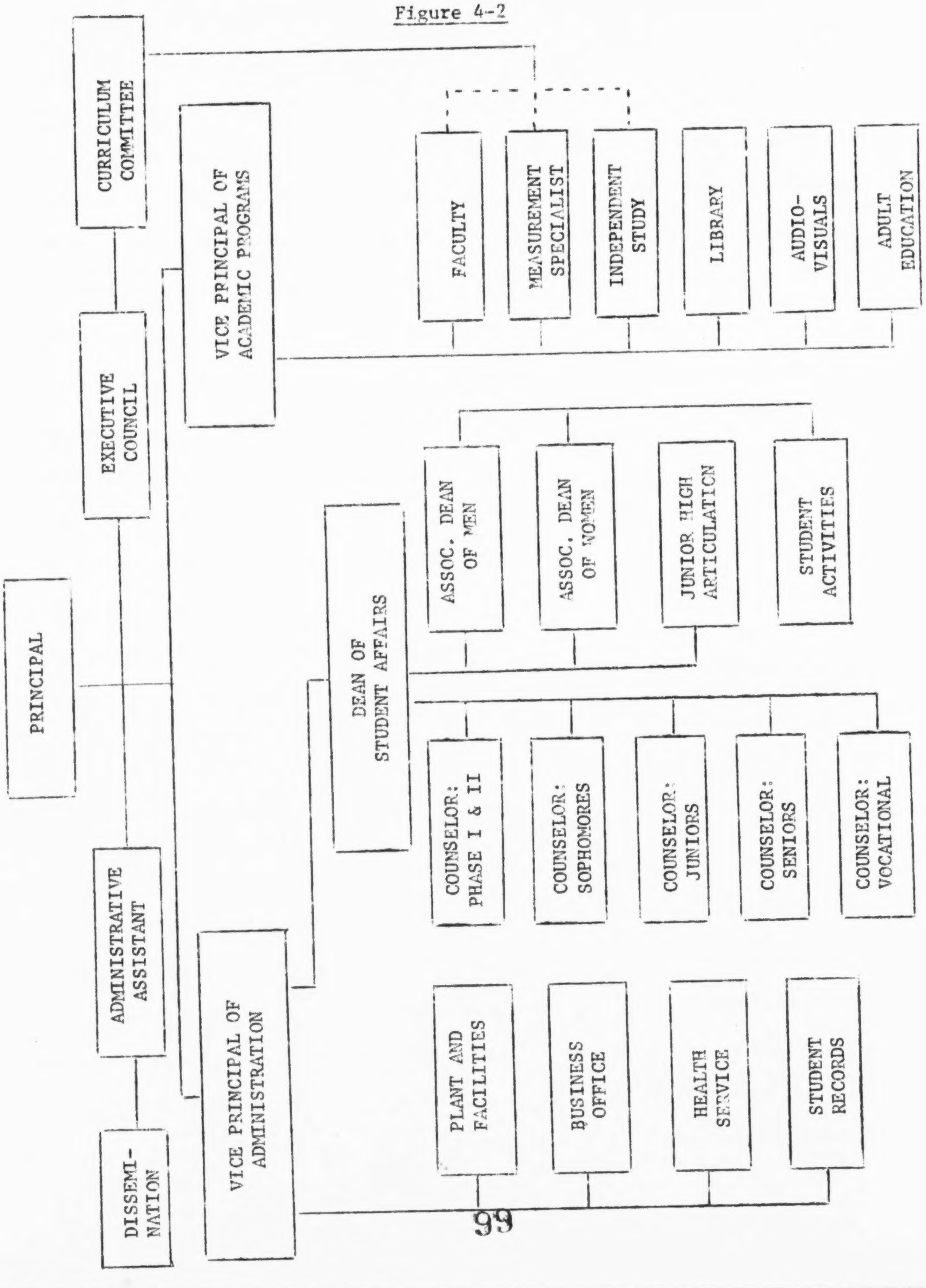
What is identified in the organizational chart that follows is an advanced state of reorganization to be reached in stages which could more efficiently administer Melbourne High School under its present conception of operation which is highly influenced by the Phasing System of Curriculum organization. Any changes of school philosophy affecting the phasing of students would necessarily influence the organizational structure. However, the organization system depicted should be able to administer a variety of programs aimed at individualized instruction assuming the availability of the automated student information system.

New Job Description

The role of the Principal would remain the same as would that of the Executive Council. A Curriculum Committee, which has been recently formed at Melbourne High School, is attached to the Executive Council. The fixed assignments of the Administrative Assistant to the Principal have been reduced to one - the dissemination service. This position needs to be more flexible in schedule in order to be of maximum service to the Principal.

SUGGESTED ORGANIZATIONAL STRUCTURE FOR
INCORPORATING AN AUTOMATED STUDENT INFORMATION SYSTEM

Figure 4-2


PRINCIPAL
CURRICULUM COMMITTEE
EXECUTIVE COUNCIL
ADMINISTRATIVE ASSISTANT
DISSEMINATION
VICE PRINCIPAL OF ACADEMIC PROGRAMS
FACULTY
MEASUREMENT SPECIALIST
INDEPENDENT STUDY
LIBRARY
AUDIO-VISUALS
ADULT EDUCATION
DEAN OF STUDENT AFFAIRS
ASSOC. DEAN OF MEN
ASSOC. DEAN OF WOMEN
JUNIOR HIGH ARTICULATION
STUDENT ACTIVITIES
COUNSELOR: PHASE I & II
COUNSELOR: SOPHOMORES
COUNSELOR: JUNIORS
COUNSELOR: SENIORS
COUNSELOR: VOCATIONAL
VICE PRINCIPAL OF ADMINISTRATION
PLANT AND FACILITIES
BUSINESS OFFICE
HEALTH SERVICE
STUDENT RECORDS

A person in charge of student affairs is recommended at the Vice Principal level. This person would coordinate all student activities of a non-academic nature. A secretary could keep the student activities calendar in this office. A Dean of Women would be added who would report to the Vice Principal of Student Affairs along with the Dean of Men. These Deans would serve primarily to maintain discipline and attendance. The Guidance Department would be coordinated by this Vice Principal. As the student recork keeping would now be automated and under the aegis of Administration, the counselors would be free to work with students more along the lines advocated by the American Personnel and Guidance Association.

Student Activities and Adult Education would be transferred away from the Vice Principal of Administration while this position would pick up the responsibility for the student records and the associated data processing.

The Vice Principal of Academic Programs would assume the responsibility for the Adult Education Program. A Measurement Specialist would be added to this group to help the faculty develop the progress achievement tests necessary for the phasing system.

Implications for Teacher Roles

As the faculty moves toward specifying behavioral objectives for each course and as they participate in the development of the needed progress achievement tests, the alternative of repackaging the curriculum into more convenient "units" may look attractive to them. Electing such an alternative would tend to shift the curriculum toward a more individualized instructional program for each student than is possible with the present phasing system. With each student working his way through a series of curriculum units, progressing at his own pace according to achievement tests, the grouping of students into grades and phases would be needed less and less.

Repackaging the curriculum is a time consuming activity. Teachers would likely find themselves spending more time on writing materials and less time imparting information as a lecturer. Communication of information to students would probably be done mostly through programmed instruction and multi-media devices. Through the use of study guides, students would spend more time organizing and synthesizing information and less time memorizing the synthesis of some teacher.

The point is that the roles of the students and the teachers are probably going to change somewhat with the introduction of an innovative student information system which can efficiently match student to material or at least track students through a complex curriculum structure. Not the least of those affected will be the counselors who will be relieved of the burden of their clerical task in order to work with students on matters of educational, vocational and personal interest.

Student Capability Profile

The information subsystem identified as Student Capability Profile is important for successful implementation of the nongraded secondary school philosophy. Based upon personal, historical, performance, affective, and predictive data considered significant for guidance officers, faculty and students, a condensed profile was developed which was compatible with data processing needs and written in machine-independent language. Appendix D is a sample profile sheet. It provides a better basis for advisors to recommend and students to select any of five phases

(differentiating intensity levels and degrees of difficulty) of four different disciplines, namely; English, Mathematics, Science and Social Studies for initial entrance each semester, and for transfer to other phases during a semester as deemed best in the interests of each student.

Summary

This chapter has presented a review of the administrative structure of Melbourne High School. Role descriptions were set forth. A suggested revision of the structure for the inclusion of an automated student data program was set forth. The use of a developed student capability profile was discussed.

CHAPTER V

SUMMARY

The project described in this report was intended to develop a model for nongrading sceondary schools. At the outset, it should be clear that no Utopian system was developed. The model developed indicated key points of consideration, including 1) student characteristics, 2) curriculum organization, 3) assessment needs and 4) administrative control elements.

Particular attention was given to the phasing system of nongradedness as it was developed at Melbourne High School in Brevard County, Florida. This sytem was described and critical problems examined. No contention was held that the Melbourne model was the only form of nongradedness. In fact, it was felt that it might be considered an intermediate step between more traditional schools and those which may be developed with completely individualized programs. It was assumed, however, that the Melbourne plan was within the implementation reach of most schools and that it represented a more adequate solution than those now operating in most secondary schools.

Sample program configurations and a sample master schedule were exhibited and discussed. The problems of phase shifting and grading were brought out. Samples of objectives were noted and their use described.

Placement of students within phases received the major attention of the project. Several placement models were developed and implementation attempted. Only one of these models was used and data concerning its effectiveness was gathered and analyzed. Numerous phase placement (achievement) tests were developed, revised and analyzed. This component of the project was undertaken in the spirit of operations research. A complete discussion and display of developed instruments is found in Volume II of this report.

The administrative roles at Melbourne High School were defined and suggested revisions made. A Student Capability Profile was developed which is suitable for computer adoption.

It should be noted that the project underwent considerable strain during its operation. Local conditions caused many problems. At the inception of the project, there were available no reasonable indicators of the problems which would arise. Despite the problems, the project continued to function, although not at the rate nor to the depth that would have been desired by the project staff and by the major subcontractors on the project.

APPENDIX A:

SAMPLE MASTER SCHEDULE

MELBOURNE

SCHEDULE OF CO

1970 -

SCHEDULE INTERPRETATION

Subjects are not graded, which means that students may pursue courses in line with their academic achievement.

Non-graded classes are based on the principle that students are different, one from the other. A student may progress rapidly one year and slowly another or he may spurt ahead in one area and lag behind in another. The purpose of phase grouping is to accommodate these differences and individualize instruction A student may be rescheduled into a higher phase at any time during the year by demonstrating increased academic ability.

Completed schedules will be multiphased since students have individual strenghts and weaknesses.

Courses are offered in depth as follows:

PHASE 1: Subjects are designed for students who need special assistance in small classes.
PHASE 2: Subjects are designed for students who need more emphasis on the basic skills.
PHASE 3: Courses are designed for students who have an average background of achievement.
PHASE 4: Subject matter is designed for extremely well prepared students desiring education in depth.
PHASE 5: Courses are available to students who are willing to assume responsibility for their own learning and pursue college level courses while still in high school.
PHASE Q: Students whose creative talents are well developed should give consideration to the Quest phase of the curriculum. This is an important dimension of the phased organization designed to give thrust in the direction of individual fulfillment. In this phase a student may research an area in which he is deeply and broadly curious either to develop creative powers or in quest of knowledge.
PHASE X: Subjects which do not accommodate student mobility; e.g., typing, physical education, are ungraded but unphased.

ADMINIST

MR. LLOYD SOUGHERS, Principal . .
MR. ROBERT KOONTZ, Vice Principal .
MR. DANIEL SCHEUERER, Vice Princip
MR. RALPH WILLIAMS, Vice Principal .
MISS FRANCES COOPER, Dean of Stud
MR. MARVIN SNIDER, Dean of Student
MR. JOHN SHAW, Curriculum Coordina
MRS. DORIS CORBETT, Counselor . .
MR. TERRY COOPER, Counselor .
MR. CARL FORTHOFER, Counselor .
MRS. SPRING WALTON, Counselor .

DEPARTMENT	INSTRUCTOR	PERIOD 1 7:35 – 8:35	Phase	Room	PERIOD 2 8:40 – 9:35	Phase	Room	9
ENGLISH	Miss Jordan	British Literature	5	Sem3	Independent Study	Q	LIB	Planning
	Mrs. Williams	British Literature	4	61	British Literature	4	61	Advance
	Mrs. Kernan	British Literature	4	60	British Literature	4	60	British L
	Mrs. Bush	British Literature	4	62	British Literature	4	62	British L
	Miss Kaney	* Dramatic Literature	4	38	Planning			British L
	Mrs. Evans	British Literature	3	13	Planning			* Readin
	Miss Fell	British Literature	3	14	Planning			* Readin
	Miss Cooksey	Planning			British Literature	3	10	British L
	Mrs. Wallace	Planning			* Writing	3	11	British L
	Mrs. Harlan	Planning			British Literature	3	12	British L
	Mrs. Young	Contemp. British Literature	3	Scaf.	Contemp. British Literature	3	Scaf.	Contemp
	Mr. Colville	Contemp. British Literature	3	Scaf.	Contemp. British Literature	3	Scaf	Contemp.
	Mrs. DuVal	American Literature	3	59	American Literature	3	59	American
	Mrs. Mosher	* In Tune with World	3	16	* In Tune with World	3	16	Planning
	To Be Assigned	Communications	2	29	Communications	2	29	Planning
	Mrs. Roberts	Communications	2	29	Communications	2	29	Planning
	Mr. Brown	Reading	1	15	Reading	1	15	Reading
SCIENCE	Mr. Einem	Biology II	4	63	Biology II	4	63	Planning
	Mr. Hollister	Planning			Marine Science	3	7	Marine S
	Mr. Ratledge	Planning			Biology I	3	47	Biology
	To Be Assigned	Biology I	3	49	Planning			Biology
	To Be Assigned	Biology I	3	36	Biology I	3	36	Biology
	Miss Walker	Planning			Biological Science	2	35	Biologic
	Mr. St. John	Biological Science	2	34	Biological Science	2	34	Planning
	Mrs. Ballauer	Physical Science	1	6	Chemistry I	4	64	Chemist
	Mr. Ballauer	Planning			Physical Science	2	6	Chemist
	To Be Assigned	Chemistry II	5	64	Chemistry I	4	64	Chemist
	Mr. Bacon	Harvard Physics I	3	50	Harvard Physics I	3	50	PSSC P
MATHEMATICS	Mr. Shaw	Independent Study	Q	LIB	A. P. Calculus	5	43	(Curric
	Mr. Martin	Trigonometry	5		Planning			Trigono
	Mr. Hughes	Algebra II	3	45	Trigonometry	3	45	Algebra
	Mr. Carey	Modern Math II	2	39	Algebra II	3	39	Planning
	To Be Assigned	Algebra II	3	12	Modern Math I	2	14	Algebra
	Mr. Kriegman	Geometry	3	37	Geometry	3	37	Geome

GH SCHOOL

E OFFERINGS

!

N

. . . . Main Office
. . . . Main Office
. . . . Main Office
. . . . Main Office
tairs . . . Counselor's Office
. . . . .Dean's Office
. . . . Main Office
. . . . Counselor's Office
. . . . Counselor's Office
. . . . Counselor's Office
. . . . Counselor's Office

COLLEGE ADMISSION REQUIREMENTS

ALL STUDENTS WHO PLAN TO ATTEND COLLEGE – please read carefully.

It is recommended that students who plan to go to college take a rigorous high school program of studies. Admission to college is based upon a combination of marks and test scores and colleges place more emphasis upon test scores than on marks.

Students who take a program of studies below the recommended level will have a great deal of difficulty making satisfactory test scores on either the College Board or state university examinations. Without satisfactory test scores you cannot be admitted to college.

The minimum requirements to assure proper preparation for college admission examinations are as follows:

3 years English
2 years Algebra
1 year Plane Geometry
1 year Trigonometry or
Analytic Geometry

2 years History
1 year Biology
1 year Chemistry
1 year Physics

Students who plan to use languages for college admission should take at least 3 years of one foreign language. Less than this is a waste of time as it will need to be repeated in college.

REQUIREMENTS FOR GRADUATION

The requirements for graduation in Brevard County are 16½ Carnegie units of credit. The subject requirements are:

Language Arts	3 years
Mathematics	1 year
Science	1 year
Physical Education	1 year
Social Studies . . . . (American Civilization and Comparative Political Systems)	2 years
Home Economics (Girls Only) . . . . (Unless one Year has been Completed in Junior High Sequence)	1 year

OD 3 10:35	Phase	Room	PERIOD 4 10:40 – 12:02	Phase	Room	PERIOD 5 12:07 – 1:00	Phase	Room	PERIOD 6 1:05 – 2:00	Phase	Room
	5	Sem3	British Literature	5	Sem3	British Literature	5	Sem3	British Literature	5	Sem3
ment English	5	61	British Literature	4	61	British Literature	4	61	Planning		
re	4	60	British Literature	4	60	British Literature	4	60	Planning		
re	4	62	British Literature	4	62	British Literature	4	62	Planning		
re	3	38	* Dramatic Literature	3	38	Humanities	4	38	Independent Study	Q	LIB
nderstanding	3	13	British Literature	3	13	British Literature	3	13	British Literature	3	13
nderstanding	3	14	British Literature	3	14	British Literature	3	14	British Literature	3	14
re	3	10	British Literature	3	10	British Literature	3	10	British Literature	3	10
re	3	11	British Literature	3	11	British Literature	3	11	British Literature	3	11
re	3	12	British Literature	3	12	Humanities	4	12	British Literature	3	12
sh Literature	3	Scaf.	Planning			* Writing	3	59	Contemp. British Literature	3	Scaf
sh Literature	3	Scaf.	Planning			Russian	3	33	Contemp. British Literature	3	Scaf
ature	3	59	American Literature	3	59	Planning			American Literature	4	59
			* In Tune with World	3	16	* In Tune with World	3	16	* In Tune with World	3	16
			Communications	2	29	Communications	2	29	Communications	2	29
			Communications	2	29	Communications	2	29	Communications	2	29
	1	15	Reading	1	15	Planning			Reading	1	15
			Independent Study Research	Q	63	Biology II	5	63	Molecular Bio. Res.	5	63
	3	7	Marine Science	4	7	Marine Science	4	7	Experimental Bio. Res.	5	7
	4	47	Biology I	4	47	Biology I	4	47	Biology I	4	47
	3	49	Biology I	3	49	Biology I	3	49	Biology I	3	49
	3	36	Planning			Biology I	3	36	Biology I	3	36
ıce	2	35	Biological Science	2	35	Biological Science	2	35	Biological Science	1	35
			(Supervision)			Physical Science	2	34	Physical Science	2	34
	3	64	Planning			Chemistry I	3	64	Chemistry I	3	64
	3	64	Chemistry I	4	64	Chemistry I	3	64	Chemistry I	3	64
	4	48	Chemistry I	4	64	Planning			Physical Science Research	5	48
	4	50	PSSC Physics I	4	50	Planning			Advanced Physics	5	50
			(Curriculum)			(Curriculum)			(Curriculum)		
	4		Trigonometry	3		Trigonometry	4		Trigonometry	4	
	3	45	Algebra II	3	45	Planning			Algebra II	3	45
			Algebra II	4	39	Algebra II	4	39	Algebra II	4	39
	3	39	Modern Math I	2	40A	Planning			Modern Math I	2	40A
	3	37	Algebra II	3	37	Algebra II	3	37	Planning		

	Mrs. Hernachi	Algebra I	3	43	Planning			Algebra II
	Mr. Gray	Algebra I	3	55	Algebra I	3	55	Algebra I
	Mr. Biondo	Planning			Algebra II	4	32	Vocation
	Mrs. Lagasse	Modern Math I	2	40A	Modern Math I	2	40A	Modern M
OCIAL STUDIES	Mrs. Wells	American Civilization	3	21	Adv. Placement Am. History	5	21	American
	Mr. Bost	American Civilization	3	Sem2	American Civilization	4	Sem2	American
	Mr. Gettys	American Civilization	4	56	American Civilization	3	56	American
	Mrs. Bull	American Civilization	.2	41	American Civilization	2	41	American
	To Be Assigned	American Civilization	2	42	American Civilization	2	42	American
	Mrs. Williams	Planning			*Comparative Political Sys.	3	4	*Compara
	Mrs. Guilday	*Comparative Political Sys.	3	9	Planning			*Compara
	Mr. Hett	*Comparative Political Sys.	2	30	American Civilization	3	30	Planning
	Mrs. Lowenstein	* Psychology	4	1B	* Psychology	4	1B	* Psychol
	Mrs. Griffith	Contemporary Affairs	3	5	Contemporary Affairs	3	5	Contempc
	Mrs. Ford	Emerging Nations	3	22	Planning			Emerging
RADE AND INDUSTRIAL	Mr. Stearns	VOCATIONAL ELECTRICITY				X	27A	VOC
	Mr. Henderson	VOCATIONAL ELECTRONICS				2	23	VOC
	Mr. Whitman	VOCATIONAL ELECTRONICS				2	1A	VOC
	Mr. Meyer	VOCATIONAL DRAFTING				X	24	VOC
	Mr. Padgett	VOCATIONAL DIVERSIFIED CONSTRUCTION				X	26	VOC
	Mr. Washington	VOCATIONAL RELATED CAR CARE				2	25A	VOC
	Mr. Elkins	VOCATIONAL AGRICULTURE I				X	46	VOC
	Mr. Dorsey	VOCATIONAL AUTOMECHANICS				3	25	VOC
	Mr. Andrews	Industrial Drafting I	X	24	Planning			Industrial
	Mr. Kraemer	D. E. Specific	X	2	D. E. General	X	2	D. E. Spe
	Miss Buyce	D. C. T. Specific	X	3	D. C. T. General	X	3	D. C. T.
	Mrs. Merrill	See Business Ed. Dept.	X	44	Cooperative Bus. Ed.	X	1	See Busin
INE ARTS	Mr. Pridgen	Intro. to Art Techniques	X	27	Intro. to Art Techniques	X	27	Planning
	Mrs. Cain	Advanced Painting	X	57	Painting	X	57	Painting
	Mr. Wheeler	Creative Arts I	X	58	Creative Arts I	X	58	Creative
	Mr. Silvester	Sculpture	X	28	Planning			Drawing
	Mr. Lindley	Mixed Chorus	X	68	Planning			Chorale
	Mr. Albert	Concert Band	X	69	Stage Band			Individua
FOREIGN LANGUAGE	Mrs. Beerenson	French III	4	19	French II	4	19	French II
	Miss Woodall	German I	3	31	German III	4	31	German I
	Mrs. Parmelee	Spanish I	4	33	Spanish I	3	33	Spanish I
	Mrs. Longacre	Spanish III	3	18	Spanish II	4	18	Planning
	Miss Wiley	Spanish II	3	20	Latin I	3	20	Planning
	Mrs. Rankin	Chinese	3	11				
	Mr. Colville	See English Dept.			See English Dept.			See Engli
AIR FORCE R.O.T.C	Col. Clark	Aerospace III	2	70	Aerospace III	3	70	Aerospac
	Major Dawson	Aerospace I	X	71	Aerospace I	X	71	Aerospac
	Sgt. Grimes	(Administration)			(Administration)			(Adminis
BUSINESS EDUCATION	Mrs. Rutstein	Planning			* Salesmanship	X	30	Shorthan
	Mrs. Ketchum	* Business Law	3	53	* Business Law	4	53	Planning
	To Be Assigned	Typing II	X	51	Typing II	X	51	Typing I
	To Be Assigned	Clerical Record Keeping	2	17	Planning			Bookkee
	Mrs. Stott	* Consumer Education	3	1	(Guidance)			Planning
	Miss Merrill		X	44		X	1	
HOME ECONOMICS	Mrs. Hauger	Independent Study	Q	67	* Human Development	3/4	67	* Food a
	Mrs. Newman	* Child Development	4	66	* Child Development	2/3	66	* Child D
	Mrs. O'Shaughnessy	* Basic Clothing	2/3	65	* Interior Decorating	3	65	* Interio
PHYSICAL EDUCATION	Mr. Steele	Dance	X	40	Planning			Dance
	Miss Fitch	Physical Education	X	GYM	Physical Education	X	GYM	Planning
	Mrs. McAllister	Planning			* Dance	X	40	Physical
	Mr. Scott	Planning			Physical Education	X	GYM	Physical
	Mr. Neal	Physical Education	X	GYM	Planning			Physical
	Mr. Zetty	Gymnastics I	X	GYM	Gymnastics I	X	GYM	Gymnast
DRIVER EDUCATION	Mr. Dunn	* Driver Education	X	N.Caf	Planning			* Driver
	Mr. Koepke	* Driver Education	X	N.Caf	* Driver Education	X	N.Caf	Planning
	Mr. Grier	* Driver Education	X	N.Caf	* Driver Education	X	N.Caf	* Driver
	Mr. Knowles	* Driver Education	X	N.Caf	* Driver Education	X	N.Caf	* Driver
INDEPENDENT STUDY	Mrs. Symonds	Independent Study	Q	LIB	Independent Study	Q	LIB	Independ
LIBRARY SCIENCE	Miss Wicker	Library Science	X	LIB	Library Science	X	LIB	Library S
	To Be Assigned	Library Science	X	LIB	Library Science	X	LIB	Library S

* SEMESTER COURSE

	4	43	Algebra I	3	43	Algebra I	3	43	Algebra I	3	43
	3	55	Geometry	3	55	Geometry	3	55	Planning		
th	2	32	Vocational Math	2	32	Vocational Math	2	32	Vocational Math	3	32
	2	40A	Planning			Modern Math I	2	40A	Geometry	4	54
ization	3	21	American Civilization	4	21	American Civilization	3	21	Planning		
ization	3	Sem2	American Civilization	4	Sem2	American Civilization	3	Sem2	Planning		
ization	4	56	American Civilization	3	56	Planning			American Civilization	3	56
ization	2	41	Planning			American Civilization	1	41	American Civilization	2	41
ization	2	42	Planning			American Civilization	1	42	American Civilization	2	42
Political Sys.	3	4	* Black Studies	2	4	*Comparative Political Sys.	3	4	* Black Studies	3	4
Political Sys.	3	9	*Comparative Political Sys.	4	9	*Comparative Political Sys.	4	9	*Comparative Political Sys.	4	9
			American Civilization	3	30	*Comparative Political Sys.	2	30	American Civilization	3	30
	3	1B	* Psychology	3	1B	Planning			*Psychology for Contemp. Life	2	1B
Affairs	3	5	A P European History	5	5	International Relations	4	5	Planning		
ions	2	22	Emerging Nations	4	22	Emerging Nations	3	22	Emerging Nations	3	22
IONAL ELECTRICITY				X	27A	ADVANCED VOCATIONAL ELECTRICITY				X	27A
IONAL ELECTRONICS				3	23	ADVANCED VOCATIONAL ELECTRONICS				4	23
IONAL ELECTRONICS				2	1A	ADVANCED VOCATIONAL ELECTRONICS				2	1A
IONAL DRAFTING				X	24	ADVANCED VOCATIONAL DRAFTING				X	24
IONAL DIVERSIFIED CONSTRUCTION					26	ADVANCED VOCATIONAL DIVERSIFIED CONSTRUCTION				X	26
IONAL RELATED CAR CARE				2	25A	COOPERATIVE AUTOMECHANICS				4	25A
IONAL AGRICULTURE II				X	46	VOCATIONAL AGRICULTURE III				X	46
IONAL AUTOMECHANICS				3	25	COOPERATIVE AUTOMECHANICS				4	25
afting I	X	24	Industrial Drafting I	X	24	Industrial Drafting II	X	24	Industrial Drafting I	X	24
ic	X	2	Planning			SUPERVISION					
cific	X	3	Planning			SUPERVISION					
Ed. Dept.	X	1	Planning			SUPERVISION					
			Graphics	X	27	Graphics	X	27	Intro. to Art Techniques	X	27
	X	57	Intro. to Art Techniques	X	57	Intro. to Art Techniques	X	57	Planning		
s II	X	58	Commercial Art	X	58	Creative Arts I	X	58	Planning		
	X	28	Drawing	X	28	Humanities			Advanced Sculpture	X	28
	X	68	Girls Chorus	X	68	Humanities	4	68	Solos & Ensembles	X	68
usic Study	Q	69	Symphonic Band	X	69	Individual Music Study	Q	69	Planning		
	3	19	Planning			French IV	4	19	French I	3	19
	3	31	Planning			German II	3	31	German II	4	31
	3	33	Spanish I	3	33	Planning			Spanish II	4	33
			Spanish III	3	18	Spanish IV	4	18	Spanish III	4	18
			Spanish II	3	20	Spanish II	3	20	Latin II	4	20
Dept			Planning			Russian	3	33	See English Dept.		
II	2	70	Aerospace II	2	70	Planning			Aerospace II	3	70
	X	71	Aerospace I	X	71	Planning			Aerospace I	X	71
tion)			(Administration)			(Administration)			(Administration)		
I	3	44	Shorthand Lab.	2	44	Shorthand I	3	44	Shorthand I	3	44
			Typing I	X	51	Typing I	X	51	Typing I	X	51
	X	51	Planning			Consumer Economics	2	53	Consumer Economics	2	53
ng I	3	17	Bookkeeping I	3	17	Bookkeeping I	3	17	Bookkeeping I	3	17
			VOCATIONAL			OFFICE			EDUCATION	X	1
	X	1				SUPERVISION					
Nutrition	2/3	67				* Gourmet Foods and Nutrition					
velopment	3	66	Planning			* Money Management	3/4	67	*Gourmet Foods and Nutrition	3	67
Decorating	3/4	65	Planning			* Interior Decorating	3/4	66	* Basic Clothing	3	66
	X	40	Choreography	X	40	Dance	2/3	65	* Advanced Clothing	4	65
			Physical Education	X	GYM	Physical Education	X	40	Advanced Dance	X	40
ducation	X	GYM	Physical Education	X	GYM	Physical Education	X	GYM	Physical Education	X	GYM
ducation	X	GYM	Physical Education	X	GYM	Physical Education	X	GYM	Physical Education	X	GYM
ducation	X	GYM	Physical Education	X	GYM	Physical Education	X	GYM	Physical Education	X	GYM
cs II	X	GYM	Planning			Gymnastics III	X	GYM	Physical Education	X	GYM
ducation	X	N.Caf	* Driver Education	X	N.Caf	* Driver Education	X	GYM	Physical Education	X	GYM
			* Driver Education	X	N.Caf	* Driver Education	X	N.Caf	* Driver Education	X	N.Caf
ducation	X	N.Caf	Planning			* Driver Education	X	N.Caf	*Driver Education	X	N.Caf
Education	X	N.Caf	* Driver Education	X	N.Caf	Planning	X	N.Caf	* Driver Education	X	N.Caf
ent Study	Q	LIB	Independent Study	Q	LIB	Independent Study			* Driver Education	X	N.Caf
cience	X	LIB	Library Science	X	LIB	Library Science	Q	LIB	Independent Study	Q	LIB
cience	X	LIB	Library Science	X	LIB	Library Science	X	LIB	Library Science	X	LIB

APPENDIX B:

SELECTED COURSE OBJECTIVES:

English - Phase 2

English - Phase 3

English - Phase 4

American History - Phase 3

Modern Mathematics I and II - Phase 2

ENGLISH - PHASE 2

GENERAL COURSE OBJECTIVES

To write with variety in sentence structure

To write a purposeful sentence

To write a paragraph

To write a paragraph in correct form

To take useful notes for study purposes

To revise written work

To review basic punctuation

To write a friendly letter in correct form

To address an envelope in block style

To write a business letter in modified block style

To write a business letter in modified block style

To write a letter of application

To prepare for a test

To build vocabulary by using vocabulary skills to attack new words

To improve study habits

To read carefully for all the information in a given selection

To study through practice and review

To demonstrate the ability to follow instructions

To read critically

To understand fiction

To recognize symbols

To describe mood

To understand a fable

To demonstrate an understanding, appreciation and acceptance of values

To discover people

To discover oneself

To practice speaking and recognizing acceptable English

To have a discussion

To be able to dramatize

WRITING

GENERAL OBJECTIVE: TO WRITE WITH VARIETY IN SENTENCE STRUCTURE

The student will be able:

1. To write a simple sentence.
2. To list in writing all the simple sentences found in a given paragraph.
3. To write a compound sentence.
4. To list in writing all the compound sentences found in a given paragraph.
5. To write a complex sentence.
6. To list in writing all the complex sentences found in a given paragraph.
7. To write a compound-complex sentence.
8. To list in writing all the compound-complex sentences found in a given paragraph.
9. To list in writing all the run-on sentences found in a given paragraph.
10. To rewrite a run-on sentence by separating the thoughts into two or more sentences.
11. To rewrite a run-on sentence by joining two thoughts by a conjunction.
12. To rewrite a run-on sentence by joining two thoughts by a semi-colon.
13. To list in writing a series of choppy sentences found in a given paragraph.
14. To rewrite a series of choppy sentences into compound or complex sentences.
15. To list in writing all the stringy sentences found in a given paragraph.
16. To rewrite a stringy sentence by subordinating ideas.
17. To rewrite a stringy sentence by dividing it into two sentences.
18. To list in writing all the sentence fragments found in a given paragraph.
19. To rewrite a sentence fragment into a complete sentence.

GENERAL OBJECTIVE: TO WRITE A PURPOSEFUL SENTENCE

The student will be able:

20. To write a declarative sentence.

21. To list in writing all the declarative sentences found in a given paragraph.

22. To write an imperative sentence.

23. To list in writing all the imperative sentences found in a given paragraph.

24. To write an interrogative sentence.

25. To list in writing all the interrogative sentences found in a given paragraph.

26. To write an exclamatory sentence.

27. To list in writing all the exclamatory sentences found in a given paragraph.

GENERAL OBJECTIVE: TO WRITE A PARAGRAPH

28. To write a topic sentence to introduce a paragraph.

29. To write a paragraph containing facts to support the topic sentence.

30. To write a paragraph giving detailed information to support the topic sentence.

31. To write a paragraph containing examples.

32. To write a paragraph describing an incident or an anecdote.

33. To write a paragraph comparing two things or ideas.

34. To write a paragraph which states and then explains a point of view.

35. To write a paragraph by contrasting two things or ideas.

36. To write a paragraph exemplifying a definition.

37. To write the details of a paragraph in chronological order.

38. To write the details of a paragraph in spatial order.

39. To write the details of a paragraph in the order of importance.

40. To write a paragraph presenting the details contained in one point of view in comparison with the details supporting another point of view.

41. To write a concluding sentence that summarizes the point made in the paragraph.

GENERAL OBJECTIVE: TO WRITE A PARAGRAPH IN CORRECT FORM

42. To write a title showing the relationship of the main idea to the paragraph.

43. To leave a line between the title and the topic sentence.

44. To indent the first word of the topic sentence.

45. To write all subsequent lines flush to the left-hand margin.

GENERAL OBJECTIVE: TO TAKE USEFUL NOTES FOR STUDY PURPOSES

46. To list in writing the main ideas in a selection.

47. To list in writing the supporting details of the main idea contained in a selection.

48. To paraphrase a selection.

49. To write a summary of a selection.

50. To write, in one's own words, the main ideas in a given lecture.

51. To write, in one's own words, the supporting details of the main idea in a given lecture.

GENERAL OBJECTIVE: TO REVISE WRITTEN WORK

52. To cross out unrelated ideas in writeen work.

53. To write-in supporting details

54. To change the order of ideas.

55. To rewrite sentences to improve their structure.

56. To correct spelling.

57. To correct punctuation.

GENERAL OBJECTIVE: TO REVIEW BASIC PUNCTUATION

58. To punctuate a statement with a period.

59. To punctuate an abbreviation with a period.

60. To punctuate a question with a question mark.

61. To punctuate an exclamatory sentence with an exclamation mark.

62. To use commas to separate items in a series.

63. To use commas to separate two or more adjectives preceding a noun.

64. To use a comma between two complete thoughts joined by a conjunction.

65. To use commas to set off information that is not essential to the meaning of the sentence but adds an idea to the sentence.

66. To punctuate dates.

67. To punctuate addresses

GENERAL OBJECTIVE: TO WRITE A FRIENDLY LETTER IN CORRECT FORM

68. To write the street address in the upper right-hand corner of the first page.

69. To write the city and state directly below the street address.

70. To write the date and year directly below the city and state.

71. To leave a space between the heading and the salutation.

72. To write the salutation flush with the left-hand margin.

73. To write the body of the letter directly below the salutation.

74. To indent the first word of the body of the letter.

75. To indent the first word of each paragraph in a letter.

76. To write the closing of a letter below the final line just to the right of the page.

GENERAL OBJECTIVE: TO ADDRESS AN ENVELOPE IN BLOCK STYLE

77. To write one's name in the upper left-hand corner of the envelope.

78. To write one's street address directly below one's name.

79. To write one's city and state directly below one's street address.

80. To write the name of the receiving person below the middle and to the left of the center of the envelope.

81. To write the receiving person's title, given name, initial and surname.

82. To write directly below the receiving person's name, (his, her) street address.

83. To write the receiving person's city and state directly below (his, her) street address.

GENERAL OBJECTIVE: TO WRITE A BUSINESS LETTER IN MODIFIED BLOCK STYLE

84. To write one's street address in the upper right-hand corner of the first page.

85. To write one's town and state directly below one's street address.

86. To write the date and the year directly below the town and state.

87. To write the inside address four typewriter spaces below the heading and flush with the left-hand margin.

88. To write the name of the firm on the first line of the inside address.

89. To write the town and city directly below the name of the firm.

90. To write the salutation two typewriter spaces below the inside address and flush with the left-hand margin.

91. To punctuate the salutation with a colon.

92. To write the salutation "Gentlemen" when writing to a firm or group.

93. To write the salutation "Dear Sir" when writing to a specific person whose name is not known.

94. To write the salutation "Dear Mr. ----" when the individual's name is known.

95. To write the first line of the body of a business letter two typewriter spaces below the salutation.

96. To indent the first line of the body of the letter equal to the length of the salutation.

97. To indent subsequent paragraphs uniform with the opening sentence.

98. To write the closing to the right of the middle of the page.

99. To write the standard form, "Yours truly" for the closing greeting.

100, To write one's signature immediately below the closing greeting.

101. To type or print one's name directly below the signature.

GENERAL OBJECTIVE: TO WRITE A LETTER OF APPLICATION

102. To state in writing the position for which one is applying and how one learned about it.

103. To write the important facts about oneself that an employer would want to know.

104. To write that one is familiar with the requirements of a position and state one's ability to fulfill such requirements.

105. To list in writing three references with addresses.

106. To request in writing an interview at the employer's convenience.

107. To give in writing a telephone number or an address where one can be reached.

GENERAL OBJECTIVE: TO PREPARE FOR A TEST

108. To test in writing specific information found in a given short story by applying the question "Who...?"

109. To test in writing specific information found in a given short story by applying the question "What...?"

110. To test in writing specific information found in a given short story by applying the question "When...?"

111. To test in writing specific information found in a given short story by applying the question "Where...?"

112. To test in writing specific information found in a given short story by applying the question "Why...?"

113. To test in writing specific information found in a given short story by applying the question "How...?"

114. To write five true-false questions that apply to a given short story.

115. To write five fill-in questions that apply to a given short story.

116. To write five multiple choice questions that apply to a given short story.

117. To write five matching questions that apply to a given short story.

118. To list in writing all the new words found in a given short story and give the definition of each.

119. To write questions pertaining to a given short story beginning with each of the following words: am, are, is, was, will, were, would, shall, should, can, could, may, might, must, has, have, had, do, does, did.

READING COMPREHENSION

GENERAL OBJECTIVE: TO BUILD VOCABULARY BY USING VOCABULARY SKILLS TO ATTACK NEW WORDS

The student will be able to:

120. To state the meaning of a new word given in a sentence by writing the word in a new sentence.

121. To state the meaning of a new word given in a sentence by rewriting the sentence in one's own words.

122. To give a written definition of a word by judging the meaning of the word from the context of the sentence.

123. To underline a word in a given sentence that has been shifted in use.

124. To write a definition of a shifted word used in a given sentence.

125. To underline a metaphor in a given sentence.

126. To write the meaning of the metaphor as it is given in the sentence.

127. To write the literal meaning of a metaphor as it is used in a given sentence.

128. To underline a simile in a given sentence.

129. To note in writing the person, place, or thing that is being described in a given simile.

130. To note in writing the person, place, or thing which is being used to give the description in a given simile.

131. To complete in writing ten incomplete similes from a list of given words.

132. To underline the word that indicates "change of name" in a given sentence.

133. To note in writing the literal meaning of the "change of name" word in a given sentence.

134. To note in writing the implied meaning of the "change of name" word in a given sentence.

135. To underline an exaggeration expressed in a given sentence.

136. To note in writing the implied meaning of an exaggeration contained in a given sentence.

137. To rewrite a given sentence using literal words or phrases in place of the exaggeration.

138. To write three sentences using exaggerations.

139. To underline an understatement found in a given sentence.

140. To note in writing the implied meaning of an understatement contained in a given sentence.

141. To rewrite a given sentence using literal words or phrases in place of an understatement.

142. To write three sentences using understatements.

143. To underline a word cluster in a given sentence.

144. To write the meaning of a word cluster as it is given in a sentence.

145. To write the literal meaning of each word in a given word cluster.

146. To list in writing ten common word clusters.

GENERAL OBJECTIVE: TO IMPROVE STUDY HABITS

147. To scan a given article or chapter and note in writing the specific facts.

148. To scan a given article and list in writing all the numerical facts.

149. To scan a given article or chapter and note in writing the answers to specific questions.

150. To scan a given table of contents and record in writing a given topic.

151. To scan a given index and note in writing the page on which a given word may be found.

152. To scan a given glossary and note in writing the definition of a given word.

153. To scan a page in a telephone book and note in writing a given name.

154. To scan a page in the telephone book and note in writing the address and phone number of a given name.

155. To scan a dictionary and write a given word and its definition.

156. To scan a dictionary and list in writing the number of different meanings shown for a given word.

157. To scan a dictionary and write the word that comes between two given words.

158. To scan a dictionary and write the correct meaning for a given word in a sentence.

159. To overview a given chapter and note in writing the title and subheadings.

160. To overview a given chapter and write the page numbers of pictures, maps, graphs, or tables.

161. To overview a given chapter and list in writing the main points in selected summaries.

162. To overview a given textbook and write the title.

163. To overview a given textbook and write the page numbers of the table of contents, the preface or forward, the introduction, pictures, graphs, maps, tables, the appendix and the index.

164. To overview a given textbook and write answers to given questions.

165. To preview a given article and write the title, headings, and subheadings.

166. To preview a given article and give a written summary of the first and last paragraph.

167. To preview a given article and write an answer to a given question.

168. To skim a given article and note in writing the main ideas contained in each paragraph.

169. To skim a given article and note in writing key words, phrases, and sentences that help one to recall information.

170. To skim a given article and write the first and last sentence of every paragraph.

171. To skim a given article and write the answers to given questions.

GENERAL OBJECTIVE: TO READ CAREFULLY FOR ALL THE INFORMATION IN A GIVEN SELECTION

172. To read and note in writing the main ideas in a given paragraph.

173. To read and note in writing the main idea of every paragraph in a given selection.

174. To read and write the answer to a given question pertaining to a main idea in a given selection.

175. To read and note in writing the details that support the main idea in a given paragraph.

176. To read and list in writing the supporting details for all the paragraphs in a given article.

177. To read and write the answers to given questions pertaining to the supporting details in a given article.

178. To read and list in writing the descriptive facts that support the main idea of a given paragraph.

179. To read and list in writing the illustrative examples that support the main idea in a given paragraph.

180. To read and list in writing the comparison-contract details that support the main idea in a given paragraph.

181. To read and list in writing the cause and effect details that support the main idea in a given paragraph.

182. To read and write the definition that supports the main idea in a given paragraph.

183. To read and list in writing the events in chronological order that support the main idea of a given paragraph.

184. To read and list in writing the events in spatial order that support the main idea of a given paragraph.

185. To read and list in writing the main ideas from several paragraphs in a given selection and write the unifying idea for that selection.

186. To read and note in writing the unifying idea in a given selection of several paragraphs.

187. To read and write answers to a given question pertaining to the unifying idea of a given selection.

GENERAL OBJECTIVE: TO STUDY THROUGH PRACTICE AND REVIEW

188. To read and recite the main idea of a given paragraph.

189. To read and recite the supporting details fo the main idea of a given paragraph.

190. To repeat, three times, with the book closed, the main idea of a given paragraph.

191. To repeat three times, with the book closed, the supporting details of the main idea of a given paragraph.

192. To read and recite the main ideas of several paragraphs in a given selection.

193. To read and recite the supporting details for the main idea of several paragraphs in a given selection.

194. To repeat three times, with the book closed, the main ideas of several paragraphs in a given selection.

195. To repeat three times, with the book closed, the supporting details for the main ideas of several paragraphs in a given selection.

196. To write three times, from memory, the main ideas of several paragraphs in a given selection.

197. To write three times, from memory, the supporting details for the main ideas for several paragraphs in a given selection.

GENERAL OBJECTIVE: TO DEMONSTRATE THE ABILITY TO FOLLOW DIRECTIONS

198. To preview a given set of written directions and note in writing the type of information they contain.

199. To listen to a given set of oral directions and write the type of information they contain.

200. To scan a given set of written directions and write the action verbs.

201. To listen to a given set of oral directions and write the action verbs.

202. To read each step of a given set of written directions and write the main ideas of each step of the directions.

203. To listen to each step of a given set of oral directions and write the main ideas of each step of the directions.

204. To read a given set of written directions and write the facts in order.

205. To listen to a given set of oral directions and write the facts in order.

GENERAL OBJECTIVE: TO READ CRITICALLY

206. To give an oral report on research done about the author of a given newspaper article.

207. To state orally the year in which a given newspaper article was written and explain how it affects the reliability of the article.

208. To explain orally whether the author of a given newspaper article is an authority on the subject of that article.

209. To state orally how the author of a given newspaper article based his article on first hand experience.

210. To state orally how the author of a given newspaper article based his article on the experience of others.

211. To state orally, based on research, whether the author of a given newspaper article is an authority on the subject of that article.

212. To identify a report in a given newspaper article and support the identification orally by giving facts to prove the statement true or false.

213. To read a given newspaper article and orally answer questions pertaining to reports found in that article.

214. To list in writing the names of sources or source books where a given report may be checked.

215. To write three paragraphs containing reports.

216. To write the phrase or phrases that alert the reader to judgments found in a given newspaper article.

217. To identify a judgment found in a given newspaper article and support the identification orally by giving facts that prove the judgment is a personal opinion.

218. To identify a judgment found in a given newspaper article and support the identification orally by giving facts that prove the judgment was written to persuade a reader to think a certain way.

219. To state orally why the judgments in a given newspaper article are being made.

220. To read a given newspaper article and orally answer questions pertaining to judgments found in that article.

221. To write three paragraphs containing judgments.

222. To state orally the know facts in a given paragraph that led the author to a conclusion about an unknown situation.

223. To identify inferences found in a given paragraph and support the identification orally by giving facts that prove the inference is a conclusion about an unknown situation based on known facts.

224. To report orally whether the reports on which a given conclusion is based, lead logically to that conclusion.

225. To read a given paragraph and answer orally questions pertaining to inferences found in that paragraph.

226. To write the inaccurate facts that are used to support a conclusion . in a given inference.

227. To write the illogical conclusion that was unrelated to the facts in a given paragraph.

228. To write inferences that are based on other inferences in a given paragraph.

229. To write inferences that are based on judgments in a given paragraph.

230. To write three paragraphs containing inferences.

GENERAL OBJECTIVE: TO UNDERSTAND FICTION

231. To state orally the time a given play or short story takes place.

232. To state orally the place a given play or short story portrays.

233. To respond orally to questions pertaining to the setting of a given play or short story.

234. To identify orally the protagonist of a given play or short story.

235. To identify orally the antagonist of a given play or short story.

236. To list in writing five characteristics of the protagonist in a given play or short story.

237. To list in writing five characteristics of the antagonist in a given play or short story.

238. To state orally why a specific character is the protagonist of a given play or short story.

239. To state orally why a specific character is the antagonist of a given play or short story.

240. To respond orally to questions pertaining to the protagonist of a given play or short story.

241. To respond orally to questions pertaining to the antagonist of a given short story or play.

242. To list in writing three characteristics for each character in a given play or short story.

243. To list in writing the characters in a given play or short story in order of their importance.

244. To respond orally to questions pertaining to characters in a given play or short story.

245. To write a summary of the exposition of a given short story.

246. To respond orally to questions pertaining to the exposition of a given short story.

247. To describe in writing the major conflict of a given play or short story.

248. To identify orally the conflict between two characters in a given play or short story.

249. To identify orally the conflict within a character in a given play or short story.

250. To identify orally the conflict between a character and society in a given play or short story.

251. To identify orally the conflict between a character and an object in a given play or short story.

252. To respond orally to questions pertaining to the major conflict of the character in a given play or short story.

253. To state in writing the resolution of the conflict of a given play or short story.

254. To list in writing the events in a given play or short story that lead to the climax.
255. To respond orally to questions pertaining to rising action in a given play or short story.

256. To identify orally the climax of a given play or short story.

257. To respond orally to questions pertaining to the climax of a given play or short story.

258. To note in writing the character or characters that behave in an unusual way in a given play or short story.

259. To state orally why a particular character taken from a given play or short story behaves the way he does.

260. To state orally why the author made a given play or short story conclude as it did.

261. To identify orally the author's message in a given play or short story.

262. To respond orally to questions pertaining to the author's message in a given play or short story.

263. To write a critical appraisal of the author's message in a given play or short story.

GENERAL OBJECTIVE: TO RECOGNIZE SYMBOLS

264. To enumerate orally statements that make or suggest comparisons between unlike things in a given short story or poem.

265. To list orally all stated comparisons in a given short story or poem.

266. To list orally all suggested comparisons in a given short story or poem.

267. To identify orally which of two unlike things is the symbol in a given short story or poem.

268. To write one's interpretation of a given symbol taken from a given short story or poem.

269. To respond orally to questions pertaining to symbols in a given short story or poem.

GENERAL OBJECTIVE: TO DESCRIBE MOOD

270. To identify orally the mood of a short story play or poem by listing the descriptive words that establish that word.

271. To list in writing examples in the setting taken from a given play, short story, or poem that create mood.

272. To list in writing events in a given play, short story or poem that create mood.

273. To respond orally to questions pertaining to mood in a given play, short story or poem

GENERAL OBJECTIVE: TO UNDERSTAND A FABLE

274. To relate orally the setting of a given fable.

275. To list in writing three characteristics of the protagonist in a given fable.

276. To list in writing three characteristics of the antagonist in a given fable.

277. To state orally the conflict contained in a given fable.

278. To note in writing unusual behaviorisms of a character in a given fable.

279. To state orally why a character in a given fable behaves the way he does.

280. To state orally why the author of a given fable concluded it as he did.

281. To state orally the moral of a given fable.

282. To compare in writing the characteristics of a given animal or thing with human characteristics.

283. To respond orally to questions pertaining to a given fable.

284. To write an original fable.

APPLIED READING

GENERAL OBJECTIVE: TO DEMONSTRATE AN UNDERSTANDING, APPRECIATION AND ACCEPTANCE OF VALUES

285. To read about and discuss material values.

286. To read about and discuss aesthetic values

287. To read about and discuss sentimental values.

288. To read about and discuss prestige values.

289. To read about and discuss how values may differ among people.

290. To read about and discuss how people, objects, and actions a person values help to shape one's character.

291. To read about and discuss how, with increased self knowledge, a young person may change his values and the things he values.

292. To read about and discuss why certain character traits are valuable and should be imitated.

GENERAL OBJECTIVE: DISCOVERING PEOPLE

293. To read about and discuss ambivalent emotions.

294. To read about and discuss how one might overcome feelings of discouragement.

295. To read about and discuss tolerance for people who are different.

296. To read about and discuss how to increase one's understanding of human motives.

297. To read about and discuss parental motives of raising children.

298. To read about and discuss the universal emotions of family living.

299. To read about and discuss how to achieve happiness within one's family.

300. To read about and discuss the essence of family.

301. To read about and discuss why people strive.

302. To read about and discuss how people strive.

303. To read about and discuss the interrelationships of people.

304. To read about and show an understanding of empathy through classroom discussion.

305. To read about and attempt to see things from another person's point of view through classroom discussion.

GENERAL OBJECTIVE: DISCOVERING ONESELF

306. To read about and discuss what self-understanding is.

307. To read about and discuss how to assert oneself.

308. To read about and discuss confusion about one's identity.

309. To read about and discuss the value of adapting a worthwhile model.

310. To read about and discuss that will help in discovering one's identity.

311. To read about and discuss the elements of identity that cannot be changed.

312. To read about and discuss the elements of identity that can be changed.

313. To read about and discuss how to cope with situations when one's identity is threatened.

314. To read about and discuss the essence of identity.

315. To read about and discuss the self-image one projects to the world.

316. To read about and discuss the person one is.

317. To read about and discuss how to achieve the personality one would like to have.

318. To read about and discuss how the person others see can differ from one's image of oneself.

319. To read about and discuss how a person's character is projected to others.

320. To read about and discuss how both admirable and unadmirable traits compose one's character.

321. To read about and discuss ways of coping with problems.

322. To read about and discuss how to choose effective methods for coping with a problem difficult.

323. To read about and discuss how inner conflicts can make coping with a problem difficult.

324. To read about and discuss how a person's method of coping with a problem reveals something about his character.

325. To discuss the means one has used to solve personal problems.

326. To discuss alternate approaches one might have used to solve a problem.

327. To discuss methods one might apply to solve current and future problems.

328. To read about and discuss how one gains an understanding and appreciation of one's own potentiality as an effective problem solver.

SPEAKING

GENERAL OBJECTIVE: TO PRACTICE SPEAKING AND RECOGNIZING ACCEPTABLE ENGLISH

329. To repeat words using correct enunciation.

330. To correct improper enunciation given by the teacher.

331. To use proper enunciation when speaking in the classroom.

332. To articulate clearly.

333. To repeat articulation exercises given by the teacher.

334. To use careful articulation in all speaking done in the classroom.

335. To correct examples of improper articulation given by the teacher.

336. To practice pronunciation drills.

337. To correct examples of improper pronunciation given by the teacher.

338. To practice correct pronunciation when speaking in the classroom.

339. To practice projection drills.

340. To project clearly when speaking in the classroom.

341. To replace slang with acceptable English and practice speaking the corrected form.

342. To speak in complete thoughts.

343. To orally complete fragmented thoughts given by the teacher.

GENERAL OBJECTIVE: DISCUSSION

344. To contribute orally to discussions.

345. To demonstrate an understanding of what one has read through discussion.

347. To question an opponents argument through discussion.

348. To support opinions orally by referring to material written in texts.

349. To demonstrate the use of logic in presenting an argument orally.

350. To express one's feelings or beliefs orally.

GENERAL OBJECTIVE: DRAMATIZATION

351. To read aloud the part of a character in a given play.

352. To read in chorus, a given poem.

353. To read aloud a given poem.

354. To express emotion in the oral reading of a character in a given play.

355. To demonstrate appropriate gesture to accompany an oral reading.

356. To improvise an oral conversation.

357. To improvise an oral argument.

358. To improvise an oral situation of one's own.

359. To create a short skit involving two or more people.

360. To introduce two people orally.

ENGLISH - PHASE 3

GENERAL COURSE OBJECTIVES:

- Language
- Speaking and Listening
- Reading
- Composition

BEHAVIORAL OBJECTIVES

ENGLISH - PHASE 3

LANGUAGE

During the course of study the student should be able:

1. To select and write the simple subjects from a list of simple sentences, with 100% accuracy.
2. To select and write the simple predicates from a list of simple sentences.
3. To rewrite sentences supplying the missing part from a list of sentences that lack either the subject or predicate.
4. To write a complete sentence by selecting a subject to refer to a given predicate.
5. To write a complete sentence by selecting a predicate to refer to a given subject.
6. To draw a slanting line between the subject and predicate in each of a list of simple sentences.
7. To draw a line under the complete subject in a sentence.
8. To draw a line under the complete predicate in a sentence.
9. To write complete sentences from a group of words.
10. To underline with one line the complete subject and underline with two lines the complete predicate contained in a list of sentences.
11. To write five complete simple sentences for a given topic.
12. To write five original sentences, each to begin with a capital letter, have a complete subject and predicate, and contain either a statement, command, question, or exclamation.
13. To supply the missing punctuation mark that indicates the end of each sentence, from a list of mixed sentences.
14. To memorize the ie - ei rule and be able to recite or write it. When the sound is like ee (as in eve) , put i before e (believe), except after c (receive).

33. To write the contractions for words.

34. To write the correct plural verbs.

35. To underline noun modifiers.

36. To underline verb modifiers.

37. To write comparative noun modifiers.

38. To write superlative noun modifiers.

39. To write comparative verb modifiers.

40. To write superlative verb modifiers.

41. To write sentences using noun modifiers.

42. To write sentences using verb modifiers.

43. To provide commas for precise meaning in sentences that can be misread because of lack of punctuation.

44. To provide commas to designate separate items.

45. To place a semi-colon in the correct position in a series of sentences where two statements are not connected by and, but, for, or nor, yet, or so.

46. To place a comma after the clause when the introductory clause is followed by a complete statement.

47. To set off the non-restrictive clauses with commas.

48. To provide quotation marks around the titles of short literary works.

50. To underline the titles of the books in a given list of sentences containing the titles of books.

51. To write pronoun determiners as adjectives.

52. To write prepositional phrases to expand the subject of simple sentences.

53. To write sentences by completing the verb with an auxiliary.

54. To write prepositional phrases to expand the predicates of simple sentences.

55. To write one sentence by combining two simple sentences with a conjunction.

15. To memorize and write the exceptions. (neither, seize, either, leisure).

16. To write, from dictation, 40 out of a possible 40 words using the ie and ei rule and the exceptions.

17. To write the nouns, contained in a list of words, with 95% accuracy.

18. To underline the nouns contained in sentences.

19. To underline the determiners and the nouns contained in sentences.

20. To write the plural form of given singular nouns with 100% accuracy.

21. To identify, in writing, whether the nouns contained in a list are singular, plural, or singular and plural.

22. To write and capitalize the proper nouns contained in a list of general nouns.

23. To underline the proper nouns contained in a paragraph.

24. To write the possessive form of nouns.

25. To write the plural possessive form of nouns.

26. To write the correct possessive form of nouns.

27. To look up in a dictionary, find, and write the correct spelling for a list of misspelled words.

28. From a list of sentences, the students will underline all of the pronouns.

    A. personal
    B. interrogative
    C. reflective
    D. indefinite
    E. demonstrative
    F. relative

29. To write a pronoun for an underlined noun.

30. To write the pronouns in a list of sentences where the pronoun is missing.

31. To underline the pronoun determiners contained in a sentence.

32. To write the appropriate form in the blank space provided in a list of sentences that offer a choice between a pronoun possessive and a contraction.

56. To write original sentences using compound subjects.

57. To write original sentences using compound verbs.

58. To write original sentences using both compound subject and compound verbs.

59. To complete the meaning of the subject and predicate in a sentence by adding a complement.

60. To underline the direct object in a sentence.

61. To underline the indirect object in a sentence.

62. To write sentences using object complements.

63. To underline the object complement in a sentence.

64. To use a predicate adjective in a sentence.

65. To write sentences using participles as adjectives.

66. To write sentences using participle phrases.

67. To write sentences using gerunds.

68. To write sentences using gerund phrases.

69. To write sentences using infinitives.

70. To underline infinitive phrases.

71. To underline infinitive clauses in sentences.

72. To write sentences using appositives.

73. To underline appositive phrases in sentences.

74. To write original sentences using independent clauses.

75. To underline subordinate clauses in sentences.

76. To write sentences using adjective clauses.

77. To underline the relative pronouns in sentences.

78. To underline noun clauses in sentences.

79. To write sentences using adverb clauses.

80. To write sentences using subordinating conjunctions.

81. To write the classification of the structure of sentences.

SPEAKING AND LISTENING

During his course of study the student should be able:

82. To observe and participate in a demonstration on diaphramatic breathing and to practice diaphramatic breathing.

83. To exhibit diaphramatic breathing and breath control by successfully completing an oral test for breath control.

84. To apply breath control when speaking.

85. To boserve and listen to a demonstration on vocal projection and to practice such projection.

86. To successfully perform vocal projection exercises.

87. To apply vocal projection techniques when speaking.

88. To listen to a demonstration on pitch variation and to practice pitch variation.

89. To successfully perform given pitch variation exercises.

90. To apply pitch variation techniques when speaking.

91. To listen to a demonstration on volume variation and to practice volume variation.

92. To successfully perform given volume variation exercises.

93. To apply volume variation techniques when speaking.

94. To observe and participate in demonstrations of proper poise for speaking performances.

95. To use proper poise when speaking.

96. To apply an intelligible rate of speed when speaking.

97. To participate in a series of oral demonstrations on pronunciation.

98. To observe and orally participate in demonstrations in the use of diacritical markings for pronunciation purposes.

99. To verbally apply diacritical markings in pronouncing new words.

100. To practice and successfully perform a given set of enunciation exercises.

101. To apply correct enunciation when speaking.

102. To observe a series of demonstrations of proper and appropriate dress for speaking occasions.

103. To dress appropriately when performing.

104. To observe a series of demonstrations on proper and appropriate posture for speaking occasions.

105. To participate in a series of demonstrations on articulation.

106. To practice and perform a set of articulation exercises.

107. To apply precise articulation when speaking.

108. To ose proper and appropriate posture while performing.

109. To observe and participate in a series of demonstrations of effective gesturing techniques.

110. To use gestures freely and effectively when speaking.

111. To observe and participate in a series of demonstrations on speaker-audience eye contact.

112. To practice effective eye contact and use effective eye contact while performing.

113. To recognize and determine in writing the Name Calling method of propaganda.

114. To recognize and determine in writing the Glittering Generalities method of propaganda.

115. To recognize and determine in writing the Transfer method of propaganda.

116. To recognize and determine in writing the Testimonial method of propaganda.

117. To recognize and determine in writing the Plain Folks method of propaganda.

118. To recognize and determine in writing the Card Stacking method of propaganda.

119. To recognize and determine in writing the Band Wagon method of propaganda.

120. To recognize and orally identify accent errors in pronunciation.

121. To recognize and identify in written form accent errors in pronunciation.

122. To recognize and orally identify sound substitution errors in pronunciation.

123. To recognize and identify in written form sound substitution errors in pronunciation.

124. To recognize and orally identify omitting sounds errors in pronunciation.

125. To recognize and identify in written form omitting sounds errors in pronunciation.

126. To recognize and orally identify transposition of sounds errors in pronunciation.

127. To recognize and identify in written form transposition of sounds errors in pronunciation.

128. To recognize and orally identify addition of sounds errors in pronunciation.

129. To recognize and identify in written form addition of sounds errors in pronunciation.

130. To recognize and orally identify the Introduction of a speech.

131. To write the purpose of the Introduction of a speech.

132. To recognize and orally identify the Contract of a speech.

133. To write the purpose of the Contract of a speech.

134. To recognize and orally identify the Body of a speech.

135. To write the purpose of the Body of a speech.

136. To recognize and orally identify the Conclusion of a speech.

137. To write the purpose of the Conclusion of a speech.

138. To identify and orally defend one's choice of the Problem-Effect-Solution pattern in the organization of a speech.

139. To write the purpose of the Problem-Effect-Solution pattern in the organization of a speech.

140. To recognize and orally state the Chronology (Time Sequence) pattern in the organization of a speech.

141. To recognize and orally state the Geographic (Space sequence) pattern in the organization of a speech.

142. To recognize and orally state the Enumeration pattern in the organization of a speech.

143. To recognize and orally state the Interrogative Pattern in the organization of a speech.

144. To write evaluations on the speaking skills of at least five public speakers.

145. To use one's participation in public speaking assignments as source for developing and listing criteria for evaluating other speakers.

146. To use one's participation in speaking skill exercises as source for developing and listing criteria for evaluating other speakers.

147. To write evaluations of a given number of speakers whom one encounters via mass media.

148. To demonstrate notetaking abilities by writing an outline of a speech.

149. To demonstrate notetaking abilities by writing an outline of a lecture.

150. To demonstrate notetaking abilities by writing an outline fo a reading selection.

151. To demonstrate notetaking abilities by writing annotated notes on a speech.

152. To demonstrate notetaking abilities by writing annotated notes on a reading selection.

153. To demonstrate notetaking abilities by writing annotated notes on a lecture.

154. To demonstrate notetaking abilities by writing a precis on a speech.

155. To demonstrate notetaking abilities by writing a precis on a lecture.

156. To demonstrate notetaking abilities by writing a precis on a reading selection.

157. To demonstrate notetaking abilities by writing notes in which one separates fact from principle, in a double-page style, for a lecture.

158. To demonstrate notetaking abilities by writing notes in which one separates fact from principle, in a double-page style, for a reading selection.

159. To demonstrate notetaking abilities by writing notes in which one separates fact from principle, in a double-page style, for a speech.

160. To take notes on specific group discussions.

161. To write a complete outline of each discussion from the notes one has taken.

162. To take notes on class lectures.

163. To write a complete outline of each lecture from the notes one has taken.

164. To recognize and record in written form the Straight Exposition method of point support in a speech.

165. To recognize and record in written form the Emotional Appeal or Harrangue method of point support in a speech.

166. To recognize and record in written form the Illustrative Development method of point support in a speech.

167. To read and analyze in writing several examples of given syllogisms.

168. To write the conclusions for given sets of logical premises.

169. To write the premises for given conclusions.

170. To listen to and write a summary of several -ifferent approaches to a controversial issue.

171. To listen to and write a general statement covering several different approaches to a controversial issue.

172. To listen to and write a supportive statement covering several different approaches to a controversial issue.

173. To write one's own opinion concerning a controversial issue.

174. To orally state one's own opinion concerning a controversial issue.

175. To read and write a summary of several different approaches to a controversial issue.

176. To read and write a general statement covering several different approaches to a controversial issue.

177. To read and write a supportive statement covering several different approaches to a controversial issue.

178. To write one's own opinion concerning a controversial issue about which he has read.

179. To orally state one's own opinion concerning a controversial issue about which he has read.

180. To determine in writing whether or not the supporting evidence for a given point is old or new.

181. To determine orally whether or not the supporting evidence for a given point is old or new.

182. To determine in writing whether or not the supporting evidence for a given point is sound.

183. To determine orally whether or not the supporting evidence for a given point is sound.

184. To determine in writing whether or not the supporting evidence for a given point is prejudiced.

185. To determine orally whether or not the supporting evidence for a given point is prejudiced.

186. To select and write down source material from one's own personal experience.

187. To select and write down source material from other school courses.

188. To select and write down source material from conversation and interviews.

189. To select and write down source material from one's reading.

190. To determine in writing the accuracy of material.

191. To determine in writing the relevance of material to a given or chosen topic.

192. To determine in writing the adequacy of a given amount of material on a given or chosen topic.

193. To determine the freshness of material for a given topic and report it in written form.

194. To determine in writing the originality of material for a given or chosen topic.

195. To select and list materials which are relative to a pro argument of a topic.

196. To select and list materials which are relative to the con argument of a topic.

197. To select and list materials which are relative to both the pro and the con arguments of a topic.

198. To select an argumentative point from a list of statements.

199. To select material, through reading, to support an argument and to prepare written notes on this material.

200. To organize a file of supportive materials by categorizing selected notes chosen from several sources.

201. To demonstrate organizational abilities by arranging one's notes from the specific to the general, in support of a general argument.

202. To demonstrate knowledge of subject matter in familiarity with material while speaking.

203. To demonstrate organizational abilities in one's ability to delete tertiary, then secondary materials, as debate time necessitates.

204. To demonstrate organizational abilities in one's abilities to add supportive materials, as debate time necessitates.

205. To demonstrate knowledge of subject matter in one's abilities to delete non-supportive materials, as debate time necessitates.

206. To demonstrate knowledge of subject matter in one's abilities to add additional supportive material, as debate time necessitates.

207. To select and list points from opponent's speech which one's own research can contradict.

208. To select and list points from opponent's speech which one's own research can support.

209. To select and list points from opponent's speech which will support one's own research.

210. To react orally to one's audience's opinion as to what the main points of one's speech were by designating what were, in one's own opinion, the main points of one's peech.

211. To react orally, to one's audience's opinion as to what the supportive points of one's speech were by designating what were, in one's own opinion, the supportive points of one's speech.

212. To listen to a persuasive argument and evaluate it by listing the emotional material used in the argument.

213. To listen to a persuasive argument and evaluate it by listing the factual material used in the argument.

214. To write an evaluation of one's own speaking skills after each performance.

215. To demonstrate orally the basic principles of parliamentary procedure.

216. To orally interpret fictional characters.

217. To orally interpret fictional conflict.

218. To orally interpret fictional atmosphere for the purpose of creating mood.

219. To orally interpret fictional imagery for the purpose of interpreting fictional atmosphere.

220. To orally interpret poetic characters.

221. To orally interpret poetic rhythm.

222. To orally interpret poetic atmosphere for the purpose of creating mood.

223. To orally interpret poetic imagery for the purpose of interpreting poetic atmosphere.

READING

At the close of this course of study, each student should be able:

224. To demonstrate the basic principles of syllabication in oral reading.

225. To exercise the principles of phonetics in oral reading.

226. To express the correct emphasis in oral reading or pre-read material.

227. To display the correct response to punctuation (comma, dash, parenthesis, exclamation point, question mark) by vocal variation in oral reading.

228. To circle from a stated set of homonyms the best homonym for a given context.

229. To correctly match a list of meanings and a list of words built from prefixes and roots.

230. To properly use a word in a sentence when the use of the word is determined by the suffix (as in beautify and beautification).

231. To match the reason for word meaning variation (as the effect of context, shift in part of speech, or word clusters) to groups of sentences showing a word portraying many meanings.

232. To follow simple procedural directions exactly.

233. To circle the better of two words with similar meanings using one's understanding of onomatopoeia and the stated situation in which the word is to be used as one's criteria.

234. To underline the better of a formal and conversational word with similar meanings using the given situation and one's understanding of levels of usage as criteria.

235. To circle the better of two words with similar donotation using the stated situation and one's understanding of the connotation of words as criteria.

236. To write one's emotional reaction to a selection heavy in glide /r/, /l/, /w/ sounds, glide /j/, /hw/, /h/ sounds, and nasal /m/, /n/, /ŋ/ sounds.

237. To write one's emotional reaction to a selection featuring fricatives or spirits and affricatives.

238. To write one's emotional reaction to a selection featuring plosive sounds /p/, /b/, /t/, /d/, /k/ /g/.

239. To write one's emotional reaction to a selection featuring front vowels /i/, /ɪ/, /e/, /ɛ/, and /æ/.

240. To write one's emotional reaction to a selection of back vowels /u/, /ʊ/, /o/, /ɔ/, and /ʔ/.

241. To write one's emotional reaction to a selection of rounded vowels /ɚ/, /ɜ/, /ʌ/, and /ɑ/.

242. To select and underline the words to which a pronoun refers in a paragraph containing a pronoun.

243. To explain orally a graph, map, or chart.

244. To underline the main idea that is stated in a unified, coherent, well-developed paragraph.

245. To write the main idea that is implied in a unified, coherent, well-developed paragraph.

246. To express in one's own words the main idea of a stated paragraph.

247. To list the subordinate ideas from a good paragraph.

248. To circle from a given list of possible purposes, the author's purpose for a stated paragraph or paragraphs.

249. To circle from a given list of possible predictions the most probable conclusion of a stated selection of narration.

250. To circle from a given list of possible applications for the facts given in a short selection of prose, the best, and most fitting application.

251. To circle from a given list of possible similar situations to a given situation, the one that is the most similar.

252. To answer orally general questions concerning the type of material and what he could expect to find in the article (with headings and subheadings) of approximately 190 words which one has previewed in three minutes.

253. To scan an article for specific facts, then list those facts.

254. To skim an article for main ideas and correctly respond to questions requiring the main ideas.

255. To evaluate the soundness of an author's ideas and assumptions orally by use of one's own experiences or material read.

256. To identify sentences drawn from a paragraph (containing reports, inferences, and judgments) as being reports, inferences, or judgments.

257. To underline sentences using propaganda techniques from a given paragraph.

258. To compile the identifying information on the book(s) using the library card catalog. The book(s) must correspond to the topic, title, or author assigned to him.

259. To find and bring to the teacher the book(s) using the identifying information of a book or books for the card catalog.

260. To find material concerning a topic by use of the index, glossary or table of contents when given the book containing the material and the topic.

261. To write, without abbreviation, the resources in periodical literature available on a given topic using the READER'S GUIDE TO PERIODICAL LITERATURE.

262. To underline in a selection of writing, the words which create sensory imagery.

263. To write a description of the atmosphere of a given selection which has the words producing imagery underlined.

264. To write a description of the atmosphere of a given selection.

265. To describe the mood presented in a story.

266. To describe in writing a major character from a given short story by discussing his relationships to other characters.

267. To discuss in writing the social position of a major character from a given short story.

268. To describe in writing the personality of a major character from a given short story.

270. To describe in writing a major character from a given short story by discussing his relationship to other characters, his position in his society, his personality, and his physical being.

271. To cross through any discrepancies in a recap of the plot of a given short story.

272. To write the name of the protagonist from a given piece of narration.

273. To circle from a given list of possible conflicts, the conflict which appeared in a given short story.

274. To discuss the pattern of narration present in a particular narrative work using the terms: exposition, intice complication, development crisis, climax, and denouement.

275. To discuss the differences in style between two short stores that he has just read by different authors. His discussion of style should involve patterns of narration, the language, the emphasis on a particular element, and the purposes of the works.

276. To correctly match "metaphor" to the example of metaphor in a list including examples of various types of figurative language.

277. To correctly match "simile" to the example of "simile" in a list including examples of various types of figurative language.

278. To correctly match "personification" to the example of "personification" from a list including examples of various types of figurative language.

279. To correctly match "apostrophe" to the example of "apostrophe" from a list including examples of various types of figurative language.

280. To correctly match "metoncmy" to the example of "metonomy" from a list including examples of various types of figurative language.

281. To correctly match "understatement" to the example of "understatement" from a list including examples of various types of figurative language.

282. To correctly match "overstatement" to the example of "overstatement" from a list including examples of various types of figurative language.

283. To correctly match the term "irony" to the examples of irony in a group of selections.

284. To underline a selection demonstrating paradox from a group of written selections.

285. To correctly match the term "allegory" to example(s) of allegory from a group of selections showing allegory, satire, and parody.

286. To correctly match the term "satire" to example(s) of satire from a group of selections.

287. To correctly match the term "parody" to example(s) of parody from a group of selections.

288. To write an original example of alliteration.

289. To identify in writing a given piece of writing as expository or narrative.

290. To correctly join in writing the subject and predicate of the sentence from a selection of poetry

291. To write the plot from a narrative poem.

292. Given a class period in which students are not allowed to talk and are surrounded by magazines and books, they will choose to read.

COMPOSITION

During the course of study the student should be able:

293: To write a paragraph that has unity, coherence, and emphasis.

294. To write a list of subjects related to a given topic.

295. To write an inductive paragraph with examples from a given subject.

296. To write a deductive paragraph with examples from a given subject.

297. To state orally the major point of a written paragraph.

298. To state in writing the major point of a written paragraph.

299. To state in writing the major point of a paragraph given orally.

300. To state orally the major point of a paragraph given orally.

301. To write paragraphs in chronological order.

302. To write paragraphs in spatial order.

303. To write paragraphs in inductive order.

304. To write paragraphs in deductive order.

305. To write paragraphs in the order of least to greatest importance.

306. To write paragraphs in the order of easy to difficult.

307. To write paragraphs in the order of cause to effect.

308. To select in writing the major point of a paragraph that has no particular order and rewrite the paragraph deductively, giving the major point greater emphasis.

309. To write a paragraph that supplies details to support a main point.

311. To write a paragraph that compares and contrasts a main point.

312. To write a paragraph that will clarify the definition of a main point.

313. To write an introductory sentence in which the basic idea which motivated the paragraph is clearly communicated to the reader.

314. To write a deductive paragraph from an outline and introduction.

315. To distinguish in writing the difference between homonyms, synonyms, antonyms, and pseudonyms.

316. To write a bibliography to list books available in the library under a given topic.

317. To write three paragraphs related to a given topic.

318. To write transitional sentences to combining three related paragraphs into a composition.

319. To write an outline for a composition which will include three paragraphs.

320. To write a first draft of a composition based upon a topic outline.

321. To write the completed version of a rough draft of a composition.

322. To revise a paragraph in which errors are indicated.

323. To revise in writing the introduction of a composition.

324. To revise, in writing, the body of a composition.

325. To revise, in writing, the conclusion of a paragraph.

326. To write a precis on a given paper.

327. To write an informal personal essay on a given topic.

328. To write a book review to show the social, political, or economic climate of the time in which the book was written.

329. To write an essay on a given topic.

330. To write an opinion essay on a given topic.

331. To write a pro argument essay on a given topic.

332. To write a con argument essay on a given topic.

333. To write a narrative from the first person point of view.

334. To write a third person narrative.

ENGLISH - PHASE 4

GENERAL COURSE OBJECTIVES

To develop a definition of language

To distinguish between different uses of language

To use oral language appropriate to specific purposes

To distinguish between oral and written communication

To alter morphemes in order to meet several differing needs

To arrange words and their affixes into patterns useful for speech and writing

To transform basic sentence patterns, and/or combinations of sentence patterns, into new patterns by adding, subtracting, and substituting grammatical elements

To investigate the process of evolution operating in English

To distinguish regional differences in American speech

To use a dictionary as a record of the history and usage of English

To apply appropriate levels of usage in speech and written expression

To use a variety of language in written expression

To write an essay describing a person, place, or thing in detail

To write an essay narrating an imaginary or real event

To write an essay defining an abstraction

To write a persuasive essay

To write a resource paper

To analyze textual meaning in a work of literature

To determine the form and structure of a work of literature

To analyze the techniques used in a work of literature

To discuss the major themes in literature

To select and make use of resource material

To write a critical analysis of a work of literature

LANGUAGE

GENERAL OBJECTIVE: DEVELOP A DEFINITION OF LANGUAGE

The student will be able:

1. To report orally on definitions of "communication" selected from literary sources.
2. To write a one-paragraph definition of "communication".
3. To write a tentative definition of "symbol".
4. To report orally on definitions of "symbol" selected from literary sources.
5. To discuss orally objects, ideas, and feelings which may be considered symbols in American culture.
6. To discuss orally objects, ideas, and feelings which may be considered symbols in a universal culture.
7. To prepare an oral report on symbols used in a student's home neighborhood.
8. To give an oral report on symbols used in a student's home neighborhood.
9. To place familiar symbols into categories consistent with the terminology outlined by Erich Fromm in The Forgotten Language.
10. To write an essay defining "symbol" so that the definition is consistent with the student's own observations.
11. To write a one-paragraph definition of "community" compatible with the concepts stated by Ashley Montagu in his essay "Social Instincts".
12. To write a list of intercultural symbols.
13. To list in writing as many communities as can be described as functioning with an intercultural community.
14. To state in writing one or two symbols which are shared by all members of a community.
15. To compare in oral discussion intercultural and community symbols.
16. To write a short essay which defines "community" in terms of shared symbols.
17. To discuss orally a series of propositions about the nature of language to ascertain their truth or falsehood.

18. To discuss orally a series of hypotheses made by linguists about the nature of language.

19. To discuss in a written essay linguistic statements and popular assumptions about the nature of language.

20. To discuss orally the kinds of meaning (lexical, grammatical, cultural) contained in a group of sentences written in English, slang, nonsense language, foreign language, etc.

21. To write an essay defining "language".

GENERAL OBJECTIVE: DISTINGUISH BETWEEN DIFFERENT USES OF LANGUAGE

The student will be able:

1. To write a one-sentence definition of "denotation".

2. To write a one-sentence definition of "connotation".

3. To replace, in a given list of words, terms having unfavorable connotations with alternates possessing favorable connotations.

4. To replace, in a given list of words, terms having favorable connotations with alternates possessing unfavorable connotations.

5. To analyze in a paragraph the connotations used in an advertisement.

6. To indicate, by marking with an appropriate symbol, whether the language used in a given group of sentences is emotive, ritualistic, informative, or poetic.

7. To write a group of original sentences using emotive language.

8. To write a group of original sentences using ritualistic language.

9. To write a group of original sentences using informative language.

10. To write a group of original sentences using poetic language.

11. To prepare a list of criteria for distinguising between language of fact and language of emotion.

12. To indicate, by marking with an appropriate symbol, whether language used in a given group of sentences is fact, inference, or opinion.

13. To write a short essay discussing whether a group of paragraphs selected from current publications are fact, inference, opinion, or a combination of these.

14. To group a given list of words into the classifications abstract and concrete.

15. To group a given list of words into the classifications general and specific.

16. To list a progression of terms, beginning with the abstract and moving toward the most concrete, when supplied with the abstract term.

17. To list a progression of terms, beginning with the concrete and moving toward the most abstract, when supplied with the concrete term.

18. To rank a given group of words in order from the specific to the general.

19. To rank a given group of words in order from the general to the specific.

20. To write a paragraph defining a given word by describing its referent.

21. To write a paragraph defining a given word by classifying it.

22. To write a paragraph defining a given word by opposing it to other terms.

23. To write a paragraph defining a given word by discussing its similarities to other terms.

24. To select unfamiliar words from a passage of literature and define them, using only the context of the passage from which they are selected as an aid to definition.

25. To write a paragraph explaining why an author uses a specific vocabulary over other possible choices.

26. To supply appropriate adjectives and/or adjectival phrases in a given passage of literary prose omitting adjectives.

27. To write a sentence justifying an author's choice of a particular adjective.

28. To supply appropriate vocabulary for specified parts of speech omitted from a model student narrative, justifying each insertion in one sentence.

29. To write an essay giving an impression of a speech derived from reading only news accounts of that speech.

30. To write an essay comparing a written impression of a speech with the speech itself.

31. To write an essay showing how the author of each of two or three critical reviews communicates with his particular audience.

32. To summarize in one paragraph information which the author of a critical review believes to be general knowledge on the part of his audience, and the information for which he believes documentation is necessary.

GENERAL OBJECTIVE: USE ORAL LANGUAGE APPROPRIATE TO SPECIFIC PURPOSES

The student will be able:

1. To use precise and vivid language in presenting ideas in class discussion.
2. To use precise and vivid language in presenting ideas in group discussion.
3. To provide supporting evidence in presenting ideas in group discussions.
4. To provide supporting evidence in presenting ideas in class discussion.
5. To give an informal talk.
6. To write an outline for an informal talk.
7. To present an oral report based on material selected from primary and secondary resource material.
8. To prepare an outline for an oral report based on material selected from primary and secondary resource material.
9. To direct a group as moderator for a group discussion.
10. To take notes as recorder for a group discussion.
11. To take part in a group discussion as an individual contributing to a group task.
12. To present the results of a group work project to an audience.
13. To present a panel discussion to an audience.
14. To prepare a seminar on a selected topic.
15. To present a seminar on a selected topic.
16. To take part in class discussion on an assigned topic.
17. To take part in an informal debate with another student.
18. To take part in a reading from a play assigned for literature study.
19. To take part in presenting a scene from a play assigned for literature study.

20. To read aloud a poem assigned for literature study.

21. To participate in a choral reading of poems assigned for literature study.

22. To participate in a group reading of poems assigned for literature study.

GENERAL OBJECTIVE: DISTINGUISH BETWEEN ORAL AND WRITTEN COMMUNICATION

The student will be able:

1. To write a one-sentence definition of "superfix".

2. To write a one-sentence definition of "intonation contour".

3. To write a one-sentence definition of "juncture".

4. To listen to a variety of words having differing stress patterns and indicate on a written copy the stress pattern of each word.

5. To listen to a sequence of compounds and phrases having similar phonemes, and transcribe the sequence, indicating the appropriate stress patterns.

6. To listen to a group of words repeated with differing juncture and indicate level, rising, or falling juncture on a written copy.

7. To listen to a group of words and indicate whether the word has been said with internal or terminal juncture on a written copy.

8. To transcribe a conversation into standard written English.

9. To transcribe a tape-recorded student panel discussion into written speech.

10. To transcribe a tape-recorded student panel discussion into standard written English.

11. To transcribe, without editing, an informal talk.

12. To develop a transcription of an informal talk into a paragraph written for an audience not present at the talk.

13. To list the differences between oral and written expression.

14. To write a one-sentence definition of "phonological sentence".

15. To write a one-sentence definition of "syntactic sentence".

To list the characteristics of a phonological sentence.

17. To list the characteristics of a syntactic sentence.

18. To arrange groups of identical structural units to form "sentences" or "non-sentences".

19. To discuss orally groups of nonsense and simple sentences to discover structural signals of meaning.

20. To write a one-sentence definition of "structural" meaning.

21. To write a one-sentence definition of "lexical" meaning.

GENERAL OBJECTIVE: TO ALTER MORPHEMES IN ORDER TO MEET SEVERAL DIFFERING NEEDS

The student will be able:

1. To write a one-sentence definition of "morpheme".

2. To write a one-sentence definition of "phoneme".

3. To write a one-sentence definition of "affix".

4. To write a one-sentence definition of "prefix".

6. To write out the morphemes of a given list of words.

7. To construct words from prefixes and bases when given a list of definitions.

8. To write a tentative definition of a given word which is based on the meaning of that word's prefix(es) and base(s).

9. To distinguish between Greek and Latin combining forms of specified words included in a given list of sentences.

10. To specify in writing whether specified derivatives included in a given list of sentences are formed from prefixes, suffixes, or both.

11. To write a one-sentence definition of "suffix" which includes the distinction between derivational and inflectional suffixes.

12. To write the morpheme symbol of a suffix, and its verbal description, when given a list of sentences containing words with suffixes.

13. To isolate,, by underlining, an unknown morpheme when given a group of known and/or unknown words containing that morpheme.

14. To symbolize an unknown morpheme, when given a group of known and/or unknown words containing that morpheme.

15. To write a verbal description of an unknown morpheme, when given a group of known and/or unknown words containing that morpheme.

16. To write a definition of "word" which includes the distinction between single morphemic words and compound morphemic words.

17. To analyze in writing the morphemes of specified words in a given group of sentences and state whether the specified words are single or compound morphemic words.

18. To write a definition of "morpheme" which includes the distinction between bound and free morphemes.

19. To write a one-sentence definition of "structure word" which accounts for the differences between "structure words" and "form class words".

20. To insert the appropriate structure words in a passage of prose containing examples of the four form classes of English words, but omitting any structure words.

21. To make a written list of as many words as can be thought of which either signal nouns or can substitute for nouns.

22. To write a one-sentence definition of the term "noun-substitute".

23. To group in writing a list of noun-substitutes according to the way they function in English sentences.

24. To specify, by using a symbol, which words in a passage of 19th century prose are nouns, which are pronouns, which are noun-determiners, and which are noun-substitutes.

25. To substitute pronouns for nouns in a given paragraph of prose containing no noun-substitutes.

26. To group in writing a list of nouns designating countable units, non-countable units, and names.

27. To state in writing the difference between noun forms.

28. To form the plural by adding the appropriate morpheme to singular nouns designating countable units.

29. To use the dictionary to discover the variant plurals of 20 nouns.

30. To form the appropriate plural of nouns derived from Old English.

31. To write the plural and possessive forms of a given list of nouns.

32. To write, from dictation, the correct spelling of the plural and/or possessive form of a given list of nouns.

33. To write a definition of possessive nouns which includes a test for distinguishing the possessive form from the plural.

34. To write, from dictation, a passage of prose containing forms of the singular and plural possessives and the plural forms of nouns, spelling each example correctly.

35. To construct a table showing the forms of the personal pronoun.

36. To write a definition of "pronoun" which includes only the personal pronouns.

37. To supply by filling in a blank the appropriate form of the personal pronoun in a passage of 19th century prose which omits all personal pronouns.

38. To define orally the terms "transitive" and "intransitive".

39. To write a one-sentence definition of the terms "transitive" and "intransitive".

40. To change all the verbs in a passage of 19th century prose written in the past tense to the present tense.

41. To change all the verbs in a passage of 20th century prose written in the past tense to the present tense.

42. To change all the verbs in a passage of 19th century prose written in the present tense to the past tense.

43. To change all the verbs in a passage of 20th century prose written in the present tense to the past tense.

44. To change a passage of prose which uses no primary or modal auxiliaries to reflect the use of primary and modal auxiliaries with as many verbs as possible.

45. To supply the correct form of the modal auxiliaries can, may, shall or will in a given list of 20 sentences written in the present tense.

46. To supply the correct form of the modal auxiliaries can, may, shall or will in a given list of 20 sentences written in the past tense.

47. To supply the correct form of the primary auxiliaries be, have, or do in a given list of 20 sentences written in the present tense.

48. To supply the correct form of the primary auxiliaries be, have, or do in a given list of 20 sentences written in the past tense.

49. To change the verb to a participle, supplying the correct form of the primary auxiliaries be or have, in a given list of 20 sentences written in the present tense.

50. To change the verb to a participle, supplying the correct form of the primary auxiliaries be or have, in a given list of 20 sentences written in the past tense.

51. To make the changes in the verb necessary for subject agreement in a given passage of prose.

GENERAL OBJECTIVE: ARRANGE WORDS AND THEIR AFFIXES INTO PATTERNS USEFUL FOR SPEECH AND WRITING.

The student will be able:

1. To discuss orally several given types of sentences to discover structural patterns common to one type.
2. To group a given list of sentences on the basis of structural patterns.
3. To construct a table of different sentence patterns.
4. To construct a table of different sentence patterns, where each sentence uses the same subject and differing predicates.
5. To define orally the form classes of English words.
6. To define orally the structural signals of English sentences.
7. To define in writing the form classes of English words.
8. To define in writing the structural signals of English sentences.
9. To write original sentences in the basic pattern N V or (n-d) N V.
10. To write original sentences in the basic pattern N^1 V N^2.
11. To write original sentences in the basic pattern N^1 V N^1, where the second N^1 refers to the first (subject) N^1.
12. To write original sentences in the basic pattern N^1 be N^1, where the second N^1 refers to the first (subject) N^1.
13. To write original sentences in the basic pattern N V Adj.
14. To write original sentences in the basic pattern N be Adj.
15. To write original sentences in the basic pattern N V Adv.
16. To write original sentences in the basic pattern N be Adv.
17. To discuss orally a definition of "actor" and "action" in grammatical terms.

18. To write in a one-sentence definition of "actor" and "action" in grammatical terms.

19. To write original sentences demonstrating the patterns N V and/or N^1 V N^2 when given a list of 20 verbs.

20. To label transitive or intransitive the verbs of original sentences demonstrating the patterns N V and/or N^1 V N^2.

21. To write a one-sentence definition of the term "subjective complement.

22. To write a one-sentence definition of the term "objective complement".

23. To write a paragraph defining the term "complement" which includes the differences between subjective and objective complement and five examples of each.

24. To differentiate by testing between sentences having the pattern N V adj and N V Adv.

25. To differentiate by testing between sentences having the pattern N be Adj and N be Adv.

26. To label the sentence patterns of a group of 25 given sentences.

27. To write five original examples of each of the basic sentence patterns and label each sentence with its pattern.

28. To define orally the "structure of predication" of English sentences.

29. To give orally at least five examples of the "structure of predication" of English sentences.

30. To write at least five examples of the "structure of predication" of English sentences.

31. To define orally the "structure of complementation" of English sentences.

32. To give orally at least five examples of the "structure of complementation" of English sentences.

33. To write at least five examples of the "structure of complementation" of English sentences.

34. To read a passage of literary prose and underline the basic structure of complementation of each sentence.

35. To read a passage of literary prose and underline the basic structure of predication of each sentence.

36. To read a short poem and underline the basic structure of complementation of each sentence.

37. To read a short poem and underline the basic structure of complementation of each poetic sentence.

GENERAL OBJECTIVE: TRANSFORM BASIC SENTENCE PATTERNS, AND/OR COMBINATIONS OF SENTENCE PATTERNS, INTO NEW PATTERNS BY ADDING, SUBTRACTING, AND SUBSTITUTING GRAMMATICAL ELEMENTS.

The student will be able:

1. To write a one-sentence definition of "transformation".
2. To write a paragraph defining the process of changing and/or combining grammatical elements in English which includes the terms "kernel sentence" and "transformation".
3. To transform two basic sentence patterns into one sentence by using coordination.
4. To transform two basic sentence patterns into one sentence by using punctuation.
5. To transform two basic sentence patterns into one sentence by using correlatives.
6. To transform two basic sentence patterns into one sentence by using ellipsis.
7. To complete a verb in a basic sentence by performing an object complement transformation.
8. To transform a sentence containing an object complement from active voice to passive voice.
9. To transform a sentence containing an object complement from passive voice to active voice.
10. To transform the infinitive into an object complement.
11. To transform the infinitive into an adjective complement.
12. To modify a nominal (noun or noun phrase) by using relative clause transformation.
13. To modify a nominal by using relative adverbial transformation.
14. To transform a relative clause into a participial phrase modifying a nominal.

15. To transform a relative clause into a participial phrase modifying a nominal.

16. To transform a relative clause into a prenominal modifier.

17. To transform a noun into possessive modifier modifying the nominal.

18. To transform a noun into a prepositional phrase modifying the nominal.

19. To transform a prepositional phrase into a noun adjunct.

20. To transform a possessive into a noun adjunct.

21. To transform a relative clause into a noun adjunct.

22. To transform a basic sentence pattern into a subordinate clause by using a subordinator.

23. To transform a subordinate clause into an adverbial.

24. To transform an adverbial by using ellipsis.

25. To transform a basic sentence pattern into a phrase of purpose.

26. To transform a phrase of purpose into an adverbial.

27. To transform a basic sentence pattern into a prepositional phrase containing -ing.

28. To transform a prepositional phrase containing -ing into an adverbial.

29. To differentiate between restrictive and non-restrictive modifiers by examining pairs of sentences using identical grammatical elements.

30. To transform a basic sentence pattern into an absolute.

31. To transform a relative clause into a restrictive clause.

32. To transform a relative clause into a non-restrictive clause

33. To transform a participial phrase into a restrictive clause.

34. To transform a participial phrase into a non-restrictive clause.

35. To transform a relative clause into an appositive.

36. To transform a restrictive clause into a restrictive appositive.

37. To transform a relative clause into an appositive.

38. To transform a restrictive clause into a restrictive appositive.

39. To transform an infinitive phrase into a subject (nominal).

40. To transform an infinitive phrase into a subjective complement (nominal).

41. To transform the possessive plus -ing into a subject.

42. To transform the possessive plus -ing into a subjective complement.

43. To transform the possessive plus -ing into a direct object.

44. To transform the possessive plus -ing into a object of a preposition.

45. To transform a relative clause into a nominal.

46. To transform a subordinate clause into a nominal.

47. To transform a sentence having a subject derived from a possessive plus -ing by using "it" and inverting subject and predicate.

48. To transform a sentence having a subject derived from an infinitive by using "it" and inverting subject and predicate.

49. To transform a sentence having a subject derived from a relative clause by using "it" and inverting subject and predicate.

50. To transform a sentence having a subject derived from a subordinate clause by using "it" and inverting subject and predicate.

51. To clarify ambiguous sentences by reconstructing the basic sentence patterns and performing transformations admitting of only one interpretation.

52. To correct ungrammatical sentences by reconstructing the basic sentence patterns and performing transformations which correct the error.

53. To correct a student essay containing ambiguities and ungrammatical sentences by reconstructing basic sentence patterns and performing transformations which correct the error.

54. To read a passage of literary prose and rank the structure of modification of each sentence.

55. To identify the grammatical elements of a passage of literary prose by marking each with an appropriate symbol.

56. To read a short poem and rank the structure of modification of each sentence.

GENERAL OBJECTIVE: TO INVESTIGATE THE PROCESS OF EVOLUTION OPERATING IN ENGLISH

The student will be able:

1. To select words derivable into modern English from a passage of Old English (translation provided).
2. To distinguish general differences in syntax between modern English and Old English when given a passage of Old English (translation provided).
3. To write a paragraph explaining the principle of the Great Vowel Shift, after comparing a list of word pairs illustrating the principle.
4. To select words derivable into modern English from a passage of Middle English (translations provided).
5. To write a short essay discussing the differences in syntax, vocabulary, and spelling between given passages of Old English and Middle English (translation provided).
6. To read aloud a passage of Chaucer's Canterbury Tales with a fair approximation of the sounds used in the 14th century.
7. To write a paragraph discussing the differences in syntax, vocabulary, and spelling between given passages of Elizabethan and modern English.
8. To apply Jesperson's loanword test to passages of Old English and Middle English in order to make inferences concerning the influence of Norman French on Old English.
9. To discuss orally the growth of language through vocabulary expansion.
10. To write a one-sentence definition of "coinage".
11. To write a one-sentence definition of "compounding".
12. To write a one-sentence definition of "semantic change".
13. To write a one-sentence definition of "loanword".
14. To write a one-sentence definition of "neologism".
15. To discuss orally the possible causes of pronunciation errors in repeating a sentence which is a tongue-twister.
16. To correct in writing a paragraph which contains several malapropisms.
17. To distinguish between the idiomatic compounds and the semantic change words used in a given group of sentences.

18. To select the neologisms from a given group of sentences and write a sentence stating what type each neologism is.

19. To discuss orally the appropriateness of a given acronym when supplied with the complete phrase or title of the acronym.

20. To identify in writing the origin of specified blends used in a given list of sentences.

21. To select the words derived by functional change from a given group of sentences.

22. To select the words derived by shortening from a given group of sentences.

23. To select the words derived by back formation from a given group os sentences.

24. To select the words derived by reduplication from a given group of sentences.

25. To select the words derived by echoism from a given group of sentences.

26. To select the words derived by sound symbolism from a given group of sentences.

27. To select the words derived from mistaken -s singulars in a given group of sentences.

28. To list several variations of commonly mispronounced words (i.e. prescription, victrola, February) and indicate whether the listed variations are variant, dialect, or lapse pronunciations.

29. To write a paragraph discussing a given language problem in modern English.

GENERAL OBJECTIVE: DISTINGUISING REGIONAL DIFFERENCES IN AMERICAN SPEECH

The student will be able:

1. To write a one-sentence definition of "dialect".

2. To write a paragraph definition of "dialect" which differentiates between regional and social dialect.

3. To write a paragraph definition of "slang" and "jargon" which differentiates between the two.

4. To discuss orally the differences between British and American English.

5. To distinguish by ear the principal distinctions between Northern, Midland, and Southern dialect.

6. To write a short essay accounting for the occurrence of local dialects in specified regions of the United States.

7. To write a short essay making inferences about the cultural history of a specified American state after examining a map of the state which includes place names.

8. To read "eye dialects".

9. To write a short essay discussing the principal features of grammar, vocabulary, and pronunciation used by an author of "eye dialect".

GENERAL OBJECTIVE: TO USE A DICTIONARY AS A RECORD OF THE HISTORY AND USAGE OF THE ENGLISH LANGUAGE

The student will be able:

1. To use a dictionary to derive the etymology of a given word.

2. To use a dictionary to distinguish the several meanings of a given word.

3. To use a dictionary to demonstrate the difference between British and American usage of a given word.

4. To use a dictionary as a resource for writing a paragraph tracing the history of the usage of a given word.

5. To use a dictionary as a resource for discovering the pronunciation of a given word.

6. To use a dictionary as a resource for determining the form class of a given word.

7. To use a dictionary as a resource for the syllabification of a given word.

8. To indicate in writing, after consulting an unabridged dictionary, the process of folk etymology involved in deriving the current meaning of a given word.

9. To indicate in writing, after consulting an unabridged dictionary, the process of semantic change which has taken place in the current usage of a given word.

10. To select from a list of 20th century words those which should be included in a future edition of a dictionary.

11. To justify in writing selections of 20th century words to be included in a future edition of a dictionary.

GENERAL OBJECTIVE· TO APPLY APPROPRIATE LEVELS OF USAGE IN SPEECH AND WRITTEN EXPRESSION

The student will be able.

1. To write a short essay discussing the principles of usage in written English.
2. To write a short essay discussing the principles of usage in spoken English.
3. To write a short essay discussing the principles of usage in both spoken and written English.
4. To analyze in writing, after consulting standard reference works, the cultural level of a group of sentences selected from current publications.
5. To analyze in writing, after consulting standard reference works, the functional variety of a group of sentences selected from current publications.
6. To distinguish in writing, after consulting standard reference works, the communication level (audience) of a group of sentences selected from current publications.
7. To analyze in writing a given sentence for the linguistic principles governing the usage in that sentence.
8. To analyze in writing the cultural level of a given sentence.

GENERAL OBJECTIVE· USE A VARIETY OF LANGUAGE IN WRITTEN EXPRESSION

1. The student will be able·

1. To write an imaginative stream-of consciousness, free-association paragraph.
2. To develop a metaphor by writing a free-association paragraph.
3. To develop several figures of speech by writing stream-of-consciousness, free-association prose.
4. To write an original figure of speech for each of several different realities.
5. To develop an objective correlative to capture the feeling of an incident or description.
6. To convey in two or three sentences an impression of a selected scene or situation, using language which appeals to all five senses.

7. To write a short theme depicting the emotional life of an object or animal.
8. To develop a free-association paragraph into a mood impression of a selected scene or situation.
9. To write an impressionistic essay.
10. To write a film shooting script for a scene from a familiar play.
11. To write an original creative prose composition.
12. To select a word with an interesting sound and write a sentence which retains the metric pattern of the word.
13. To write a couplet based on a word with an interesting sound.
14. To substitute new vocabulary for the original form class words in five lines of poetry, while retaining the poet's original rhythmic pattern.
15. To write an observation about some simple object in a line with poetic rhythm.
16. To write a couplet about some simple object.
17. To write an apostrophe.
18. To write a Haiku.
19. To write free verse.
20. To write blank verse.
21. To write an original poem.

GENERAL OBJECTIVE: USE A VARIETY OF SENTENCE STRUCTURE IN WRITTEN EXPRESSION

The student will be able:

1. To write a short, abrupt sentence.
2. To write a cumulative sentence.
3. To write a sentence qualifying one basic idea on at least two levels.
4. To write a sentence using images of sight.
5. To write a sentence using images of sound.
6. To write a sentence using images of smell.
7. To write a sentence using images of taste.
8. To write a sentence using images of touch.
9. To write a simple sentence.
10. To write a sentence which adds at least three layers of meaning to the basic pattern.
11. To write a sentence using details of action.
12. To write a sentence creating a mood or feeling from a fact.
13. To write a paragraph recreating a scene through the use of sensory imagery.
14. To write a paragraph creating a mood or feeling from an incident.
15. To write a paragraph creating a mood or feeling from a description.
16. To write a para-raph developing a basic idea with several qualifications.
17. To write a paragraph developing an incident with several qualifications.
18. To write a paragraph developing an idea by using parallel (coordinate) sentences.
19. To write a paragraph developing an incident by using parallel (coordinate) sentences.
20. To write a paragraph developing an idea by using subordinate sentences.

21. To write a paragraph developing an incident by using subordinate sentences.

22. To write a paragraph developing an idea by using coordinate and subordinate sentences.

23. To write a paragraph developing an incident by using coordinate and subordinate sentences.

GENERAL OBJECTIVE: EDIT AND EVALUATE HIS OWN WRITTEN EXPRESSION

The student will be able:

1. To apply a check list to student essays to indicate needed revisions.
2. To mark with appropriate symbols mechanical errors in student essays.
3. To write critical comments on the organization of student essays.
4. To discuss in a group the organization of student essays.
5. To evaluate in writing the supporting evidence or details used in student essays.
6. To discuss in a group the supporting evidence or details used in student essays.
7. To analyze in writing the logic of student essays.
8. To discuss in a group the logic of student essays.
9. To select the best essay from a given group of student essays and write a paragraph justifying the selection.
10. To revise an essay on the basis of student evaluation.
11. To revise an inadequate student model essay to incorporate needed mechanical corrections.
12. To revise an inadequate student model essay to incorporate changes in sentence structure necessary for clarity and correctness.
13. To revise an inadequate student model essay to incorporate the changes in organization necessary to produce a clear communication.
14. To revise an inadequate student model essay to incorporate the changes in logic and supporting evidence necessary to produce a logical communication.

GENERAL OBJECTIVE: WRITE AN ESSAY DESCRIBING A PERSON, PLACE, OR THING IN DETAIL

The student will be able:

1. To find one word which accurately suggests a peculiar shape, such as a cloud, a mountain, a jaw, etc.
2. To describe an object in one sentence which captures the essence of the object.
3. To write one sentence which expresses character as it is caught in a revealing moment.
4. To write one sentence explaining the essence of a conflict as it is conveyed in a photograph.
5. To describe in a sentence a familiar object with a standard cliché, and convert the cliché into precise words revealing an original observation.
6. To describe in a paragraph an object in such a way that it appears to symbolize the atmosphere of a painting.
7. To describe in a paragraph a building or a "place", using photographic details chosen so that the subject can be pictured or drawn by someone else.
8. To write a scientific definition of a term or object; then write an imaginative definition of the same term or object.
9. To write a paragraph describing or characterizing a person, action, or scene by a suggestive analogy.
10. To construct a table listing the characteristics of an individual, and write a phrase showing the individual in behavior demonstrating each characteristic listed.
11. To write a paragraph describing the same individual from two different points of view.
12. To write a paragraph describing a simple object, such as a book or a potato, in a manner which conveys a single impression of the object.
13. To write a paragraph describing the external details of an individual in a manner which leads the reader to make a judgment concerning the individual's character.
14. To write a paragraph using external details to describe an individual in such a way that the reader has an unfavorable impression.
15. To write a paragraph using external details to describe someone so that the reader has a favorable impression.

16. To write a one-sentence description of a literary character.

17. To write a paragraph comparing a friend or relative to a character in literature.

18. To write a character sketch using observed characteristic behavior and dialogue to create a dominant impression.

19. To write a short essay comparing a stereotyped impression of a person, place, or thing with a reliable factual observation.

21. To write an essay presenting an individual from the point of view of each of several different observers.

22. To write a character sketch based on a personal interview.

23. To write an essay presenting an individual from one point of view derived from the dominant impression of each of several observers.

GENERAL OBJECTIVE: WRITE AN ESSAY NARRATING AN IMAGINARY OR REAL EVENT

The student will be able:

1. To develop a checklist for a successful narrative.

2. To write a chronology of a day's events.

3. To write a chronology which reveals character through daily entries.

4. To list a sequence of events.

5. To rearrange a given sequence of events in an order which produces climax and suspense.

6. To write a narrative which develops a prosaic incident into a surprise ending.

7. To write a narrative based on the raw materials given in a newspaper account of an incident.

8. To write an essay comparing and contrasting two published accounts of the same event.

9. To write a narrative which beings *in media res* and uses flashback and foreshadowing to lead to the conclusion.

10. To develop a brief incident into a narrative by using hyperbole.

11. To develop a brief incident into a narrative by using irony.

12. To develop a brief incident into a narrative by using understatement.

13. To write a narrative which makes a prosaic routine interesting by using hyperbole, irony, and understatement.

14. To write a narrative centering on one sharply defined character.

15. To write a narrative centering on the conflict between two sharply defined characters.

16. To write a narrative which describes an action in half a page of dialogue, using no exposition.

17. To write a narrative which uses sensory images, action details, and chronological sequence to create suspense.

18. To alter the point of view of a narrative paragraph written in first person narrator to third person central.

19. To alter the point of view of a narrative paragraph written in first person narrator to third person omniscient.

20. To alter the point of view of a narrative paragraph written third person observer to the first person narrator.

21. To alter the point of view of a narrative paragraph written in third person omniscient to first person narrative.

22. To alter the point of view of a narrative paragraph written in third person central to first person narrator.

23. To alter a narrative paragraph written in third person omniscient to first person observer.

24. To alter a narrative paragraph written in third person observer to first person observer.

25. To write a narrative essay from the point of view of the first person narrator.

26. To write a narrative essay from the point of view of the first person observer.

27. To write a narrative essay from the point of view of the third person omniscient.

28. To write a narrative essay from the point of view of the third person observer.

29. To write a narrative essay from the point of view of the third person central.

30. To write an essay narrating an imaginary or real event.

GENERAL OBJECTIVE: WRITE AN ESSAY DEFINING AN ABSTRACTION

The student will be able:

1. To select a general word, such as "man", and make a chart dividing its meaning until a specific point, such as "Hubert Humphrey", is reached.

2. To select a specific individual, such as "Holden Caulfield" and make a chart generalizing to the most comprehensive abstraction possible, such as "adolescence.

3. To write a paragraph reducing a general word to its most specific level.

4. To write a paragraph expanding a specific object to the most general abstraction possible.

5. To describe an action standing for a particular idea in two or three sentences.

6. To write a sentence expressing parallel ideas in parallel structure.

7. To write a sentence describing similar images in parallel structure.

8. To write a paragraph placing ideas and images of equal rank in parallel forms.

9. To write a sentence which contrasts two opposing terms in parallel construction.

10. To write a paragraph which contrasts two opposing ideas in parallel construction.

11. To write an essay which develops two opposing ideas by using parallelism.

12. To write a definition of an abstract term in one sentence.

13. To write a definition of an abstract term using figures of speech.

14. To write a definition of an abstract term using concrete specific language.

15. To write a paragraph defining a term by classifying it.

16. To write a paragraph defining a term by comparing it with another term.

17. To write a paragraph defining a term by contrasting it with another term.

18. To write an essay defining an abstract term.

GENERAL OBJECTIVE: WRITE AN ESSAY DEVELOPING A HYPOTHESIS

The student will be able:

1. To write a one-sentence major premise.
2. To write a one-sentence minor premise.
3. To write a one-sentence conclusion which is derived from major and minor premises.
4. To write a paragraph drawing a conclusion from major and minor premises.
5. To write a one-sentence generalization supported by a proof.
6. To write a sentence generalization supported by a proof.
7. To write a sentence stating a hypothesis.
8. To write a paragraph supporting a stated hypothesis with several examples.
9. To write a one-sentence analogy.
10. To write a paragraph extending a one-sentence analogy.
11. To write a paragraph enumerating observable facts.
12. To write a paragraph developing observable facts into a concluding hypothesis.
13. To write a paragraph which describes a process in a series of steps.
14. To write a paragraph developing a central idea to a logical conclusion.
15. To write a paragraph developing a central idea by repetition.
16. To write a paragraph developing a central idea by variation.
17. To write a paragraph developing a central idea by repetition and variation.
18. To link together three or more unrelated paragraphs on the same topic by using connectives, pronouns and antecedents.
19. To write statements of fact which link given generalizations on the same idea by supplying evidence supporting the generalization.
20. To write a one-sentence statement proving a given generalization.

21. To write a one-sentence statement of fact supporting a given generalization.

22. To state which of a given list of arguments are logical and which are illogical by writing a one-sentence proof for each argument.

23. To write a paragraph introducing a hypothesis in informative language (language of fact).

24. To write a paragraph introducing a hypothesis in emotive language (language of emotion).

25. To supply written incidents or concrete examples for a student model essay which contains several unsupported conclusions.

26. To write a topic outline for an essay developing a hypothesis.

27. To write a sentence outline for an essay developing a hypothesis.

28. To write an essay defining a literary form.

29. To write a paragraph defining a literary term by using examples.

30. To write an essay defining a literary term by using examples.

31. To write a paragraph defining a literary term by classifying it.

32. To write an essay defining a literary term by classifying it.

33. To write an essay analyzing a poem.

34. To write an essay analyzing a play.

35. To write an essay analyzing a novel.

COMPOSITION

GENERAL OBJECTIVE: WRITE A PERSUASIVE ESSAY

The student will be able:

1. To write a sentence which states a position concerning a problem.
2. To write a paragraph stating a position concerning a problem.
3. To write a paragraph stating a problem.
4. To write a paragraph summarizing the causes of a problem.
5. To write a paragraph summarizing the effects of a problem.
6. To write a paragraph selecting one best solution to a problem from several possibilities.
7. To write a paragraph proposing several solutions to a problem.
8. To write a paragraph proposing how a solution to a problem might best be put into effect.
9. To write a one-sentence statement of fact not admissible of interpretation.
10. To write a one-sentence statement of fact concluding with an interpretation.
11. To write a one-sentence statement of opinion.
12. To make a list of statements of fact and statements of opinion which occur in a group of given paragraphs.
13. To outline the opening paragraphs of several persuasive essays, distinguishing between position and proof.
14. To write a paragraph comparing the tone of several given persuasive essays.
15. To write an essay comparing the tone of several given persuasive essays.
16. To write a paragraph summarizing a series of proofs.
17. To write a paragraph in which a series of proofs lead to a stated conclusion.

18. To write a paragraph stating a position concerning a problem using an emotional tone.

19. To write a paragraph stating a position concerning a problem using an objective.

20. To write a paragraph stating a position concerning an old problem in a fresh, original way.

21. To outline an essay which states a position concerning a problem.

22. To outline an essay dealing with a problem from a scientific point of view.

23. To outline an essay dealing with a problem from a humanistic point of view.

24. To write an essay analyzing a problem and proposing a solution.

25. To write an essay defending a hypothesis by using analogy, example, induction, and deduction.

26. To write an essay opposing a hypothesis by using analogy, example, induction, and deduction.

27. To write a persuasive essay on a controversial subject.

28. To develop a checklist for a good persuasive essay.

GENERAL OBJECTIVE: WRITE A RESOURCE PAPER

The student will be able:

1. To take notes from primary sources on a specified topic.

2. To take notes from secondary sources on a specified topic.

3. To write a topic outline for a resource paper.

4. To write a sentence outline for a resource paper.

5. To prepare a table of contents from a topic outline of a resource paper.

6. To prepare a footnote for a quotation used in a resource paper.

7. To prepare a footnote for documenting evidence given in a resource paper.

8. To prepare a bibliography for a resource paper.

9. To write a long paper exploring a limited topic in depth after consulting primary and secondary sources.

LITERATURE

GENERAL OBJECTIVE: ANALYZE TEXTUAL MEANING IN A WORK OF LITERATURE

The student will be able:

1. To write a summary of the plot of a short story in one sentence.
2. To write a summary of the plot of a novel in one paragraph.
3. To write a summary of the plot of a play in one paragraph.
4. To write a précis of an essay.
5. To outline an essay, including the author's central idea, subordinate themes, and supporting details.
7. To discuss orally the literal meaning of a passage of prose.
8. To discuss orally the literal meaning of a passage of poetry.
9. To discuss orally the literal meaning of a dramatic speech.
10. To write a paragraph which interprets a passage of poetry on more than one level of meaning.
12. To paraphrase a line of poetry orally.
13. To paraphrase a line of poetry in a written sentence.
14. To paraphrase a short poem in one paragraph.
15. To explain orally a figure of speech used in a poem.
16. To explain in writing a figure of speech used in a poem.
17. To interpret orally a symbol used in a poem.
18. To interpret in writing a symbol used in a poem.
19. To explain orally a figure of speech used in a short story.
20. To explain in writing a figure of speech used in a short story.
21. To interpret orally a symbol used in a short story.
22. To interpret in writing a symbol used in a short story.
23. To explain orally a figure of speech used in a novel.
24. To explain in writing a figure of speech used in a novel.

25. To interpret orally a symbol used in a novel.

26. To interpret in writing a symbol used in a novel.

27. To list the figures of speech used in a passage of poetry.

28. To list the figures of speech used in a passage of prose.

29. To list the figures of speech used in a passage of drama

30. To list the metaphors in a passage of poetry.

31. To list the metaphors in a passage of prose.

32. To list the metaphors in a passage of drama.

33. To list the similes in a passage of poetry.

34. To list the metaphors in a passage of prose.

35. To list the metaphors in a passage of drama.

36. To discuss orally the use of hyperbole in a passage of poetry.

37. To discuss orally the use of hyperbole in a passage of prose.

38. To discuss orally the use of hyperbole in a passage of drama.

39. To write a paragraph discussing the use of hyperbole in a passage of poetry.

40. To write a paragraph discussing the use of hyperbole in a passage of prose.

41. To write a paragraph discussing the use of hyperbole in a passage of drama.

42. To discuss orally the use of irony in a passage of poetry.

43. To discuss orally the use of irony in a passage of prose.

44. To discuss orally the use of irony in a passage of drama.

45. To write a paragraph discussing the use of irony in a passage of poetry.

46. To write a paragraph discussing the use of irony in a passage of prose.

47. To write a paragraph discussing the use of irony in a passage of drama.

48. To discuss orally the use of understatement in a passage of poetry.

49. To discuss orally the use of understatement in a passage of prose.

50. To discuss orally the use of understatement in a passage of drama.

51. To write a paragraph discussing the use of understatement in a passage of poetry.

52. To write a paragraph discussing the use of understatement in a passage of prose.

53. To write a paragraph discussing the use of understatement in a passage of drama.

54. To select and list ironic quotations from the context of a poetic work.

55. To select and list ironic quotations from the context of a prose work.

56. To select and list ironic quotations from the context of a dramatic work.

57. To write a paragraph analyzing a given quotation from a poem.

58. To write a paragraph analyzing a given quotation from a play.

59. To write a paragraph analyzing a given quotation from a novel.

60. To select and list examples of dramatic irony from a play.

61. To select and list examples of dramatic irony from a novel.

62. To select and list examples of dramatic irony from a short story.

63. To read a short poem aloud.

64. To take part in a group reading of poetry.

65. To participate in a choral reading of poetry.

66. To read a part in a scene selected from a play.

67. To act in a scene selected from a play.

68. To read aloud a passage of prose.

69. To skim-read secondary sources for the main idea.

70. To skim-read secondary sources for documentation.

GENERAL OBJECTIVE: DETERMINE THE FORM AND STRUCTURE OF A WORK OF LITERATURE

The student will be able:

1. To discuss orally the structure of a poem.
2. To write a paragraph discussing the structure of a poem.
3. To discuss orally the form of a poem.
4. To write a paragraph discussing the form of a poem.
5. To discuss orally the structure of a play.
6. To write a paragraph discussing the structure of a play.
7. To discuss orally the structure of a novel.
8. To write a paragraph discussing the structure of a novel.
9. To discuss orally the structure of a short story.
10. To write a paragraph discussing the structure of a short story.
11. To discuss orally the structure of an essay.
12. To write a paragraph discussing the structure of an essay.
13. To read aloud a line of poetry and identify the meter.
14. To scan a line of poetry and mark the syllables with appropriate stress marks.
15. To identify orally the speaker of a poem.
16. To identify in a sentence the speaker of a poem.
17. To write a one-sentence definition of "alliteration".
18. To write a one-sentence definition of "onomatopoeia".
19. To write a one-sentence definition of "assonance".
20. To write a one-sentence definition of "free verse".
21. To write a one-sentence definition of "consonance".
22. To write a one-sentence definition of "blank verse".
23. To write a one-sentence definition of "sonnet".
24. To write a short paragraph defining the types of sonnets.

25. To write a one-sentence definition of "ode"

26. To write a one-sentence definition of "elegy".

27. To write a one-sentence definition of "motif".

28. To write a one-sentence definition of "symbol".

29. To write a one-sentence definition of "couplet".

30. To write a one-sentence definition of "meter".

31. To write a one-sentence definition of "rhyme".

32. To write a one-sentence definition of "verse".

33. To write a one-sentence definition of "stanza".

34. To explain orally the rhyme scheme of a stanza of poetry.

35. To write a paragraph explaining the rhyme scheme of a stanza of poetry.

36. To identify orally examples of assonance in a poem.

37. To identify orally examples of consonance in a poem.

38. To select by underlining examples of assonance in a given poem.

39. To select by underlining examples of consonance in a given poem.

40. To mark the rhyme scheme of a given poem by using appropriate symbols.

41. To identify orally examples of free verse.

42. To identify orally examples of blank verse.

43. To identify orally examples of sonnets.

44. To identify orally examples of odes.

45. To identify orally examples of elegies.

46. To identify orally examples of couplets.

47. To distinguish in writing between examples of different poetic forms.

48. To write a one-sentence definition of "allegory".

49. To write a one-sentence definition of "parable".

50. To write a one-sentence definition of "legend".

51. To write a one-sentence definition of "myth".

52. To write a one-sentence definition of "parody".

53. To write a one-sentence definition of "prologue".

54. To write a one-sentence definition of "epilogue".

55. To write a one-sentence definition of "chorus".

56. To write a one-sentence definition of "archetype".

57. To write a one-sentence definition of "flashback".

58. To write a one-sentence definition of "_in media res_".

59. To write a one-sentence definition of "denouement".

60. To write a one-sentence definition of "resolution".

61. To write a one-sentence definition of "climax".

62. To write a one-sentence definition of "conflict".

63. To write a one-sentence definition of "protagonist".

64. To write a one-sentence definition of "antagonist".

65. To write a paragraph defining "short story".

66. To write a paragraph defining "novella".

67. To write a paragraph defining "novel".

68. To write a one-sentence definition of "act".

69. To write a one-sentence definition of "scene".

70. To write a one-sentence definition of "plot".

71. To write a one-sentence definition of "character".

72. To write a one-sentence definition of "setting".

73. To plot a graph showing the dramatic structure of a play.

74. To plot a graph showing the dramatic structure of a novel.

75. To write a paragraph distinguishing between given examples of allegory and parable.

76. To write a paragraph distinguishing between given examples of legend and myth.

77. To identify orally examples of archetype patterns in literature.

78. To make an outline of the structure of a play.

79. To make an outline of the structure of a novel.

80. To make an outline of the structure of a short story.

81. To make an outline of the structure of an essay.

82. To write an essay comparing the structure of one novel to that of another.

83. To write an essay comparing the structure of one play to that of another.

84. To write an essay discussing the interrelationship of character to plot in a story.

85. To write an essay discussing the interrelationship of character to setting in a story.

86. To write an essay discussing the interrelationship of one scene in a play to the structure of the play.

87. To write an essay distinguishing between types of dramatic media.

88. To transform a given short story into a play, supplying stage directions and costume details from the short story.

89. To transform a given short story into a radio script, supplying dialogue and sound effects as necessary.

90. To write a paragraph distinguishing between fiction and non-fiction.

91. To write a paragraph distinguishing between poetry and prose.

92. To identify orally examples of flashbacks in a drama.

93. To identify orally examples of flashbacks in a-work of fiction.

94. To identify orally the climax of a drama.

95. To identify orally the climax of a novel.

GENERAL OBJECTIVE: ANALYZE THE TECHNIQUES USED IN A WORK OF LITERATURE

The student will be able:

1. To write a one-sentence definition of "irony".
2. To write a one-sentence definition of "dramatic irony".
3. To write a one-sentence definition of "paradox".
4. To write a one-sentence definition of "hyperbole".
5. To write a one-sentence definition of "satire".
6. To write a one-sentence definition of "allusion".
7. To identify orally examples of alliteration in a given poem.
8. To identify orally examples of onomatopoeia in a given poem.
9. To identify orally examples of metaphor in a given poem.
10. To identify orally examples of simile in a given poem.
11. To identify orally examples of personification in a given poem.
12. To identify orally examples of metonymy in a given poem.
13. To identify orally examples of synecdoche in a given poem.
14. To identify orally examples of litotes in a given poem.
15. To write a one-sentence definition of "point of view".
16. To write a one-sentence definition of "flashback".
17. To write a one-sentence definition of "foreshadowing".
18. To write a one-sentence definition of "atmosphere".
19. To write a one-sentence definition of "mood".
20. To write a one-sentence definition of "tone".
21. To write a one-sentence definition of "diction".
22. To write a one-sentence definition of "style".
23. To write a one-sentence definition of "malapropism".
24. To write a one-sentence definition of "voice".

25. To write a one-sentence definition of "motif".
26. To write a one-sentence definition of "narrator".
27. To write a one-sentence definition of "third person".
28. To write a one-sentence definition of "first person".
29. To write a one-sentence definition of "omniscient".
30. To write a one-sentence definition of "first person narrator".
31. To write a one-sentence definition of "third person narrator".
32. To write a one-sentence definition of "observer".
33. To write a one-sentence definition of "first person observer".
34. To write a one-sentence definition of "third person observer".
35. To write a one-sentence definition of "third person omniscient".
36. To write a one-sentence definition of "sterotype".
37. To write a one-sentence definition of "stock character".
38. To discuss orally the author's use of imagery in a given poem.
39. To discuss orally the author's use of imagery in a given story.
40. To discuss orally the author's use of imagery in a given work of non-fiction.
41. To discuss orally the author's use of imagery in a given work of drama.
42. To write an essay discussing the author's use of imagery in a given poem.
43. To write an essay discussing the author's use of imagery in a given work of fiction.
44. To write an essay discussing the author's use of imagery in a given drama.
45. To write an essay discussing the author's use of imagery in a given work of non-fiction.
46. To discuss orally the author's use of symbolism in a given poem.
47. To discuss orally the author's use of symbolism in a given drama.

48. To discuss orally the author's use of symbolism in a given work of fiction.

49. To discuss orally the author's use of symbolism in a given work of non-fiction.

50. To write an essay discussing the author's use of symbolism in a given poem.

51. To write an essay discussing the author's use of symbolism in a given drama.

52. To write an essay discussing the author's use of symbolism in a given work of fiction.

53. To write an essay discussing the author's use of symbolism in a given work of non-fiction.

54. To discuss orally the diction of a given poem.

55. To discuss orally the diction of a given drama.

56. To discuss orally the diction of a given work of fiction.

57. To discuss orally the diction of a given work of non-fiction.

58. To discuss in an essay the diction of a given poem.

59. To discuss in an essay the diction of a given drama.

60. To discuss in an essay the diction of a given work of fiction.

61. To discuss in an essay the diction of a given work of non-fiction.

62. To discuss orally the mood of a passage of poetry.

63. To discuss orally the mood of a passage of prose.

64. To write a paragraph discussing the mood of a passage of poetry.

65. To write a paragraph discussing the mood of a passage of prose.

66. To discuss orally the tone of a passage of poetry.

67. To discuss orally the tone of a passage of prose.

68. To write a paragraph discussing the tone of a passage of poetry.

69. To write an essay discussing the tone of a passage of prose.

70. To discuss orally the point of view of a given work of fiction.

71. To discuss orally the point of view of a given work of non-fiction.

72. To write an essay discussing the point of view of a given work of fiction.

73. To write an essay discussing the point of view of a given work of non-fiction.

74. To discuss orally the use of foreshadowing in a given work of literature.

75. To write an essay discussing the use of foreshadowing in a given work of literature.

76. To write an essay discussing the author's treatment of time in a given work of literature.

77. To write an essay discussing the author's treatment of dialogue in a given work of literature.

79. To write an essay discussing the author's treatment of dialogue as character revelation in a given poem.

81. To write an essay discussing the author's treatment of dialogue as character revelation in a given work of fiction.

82. To write a paragraph defining "tragedy".

83. To write a paragraph defining "comedy".

84. To write a paragraph defining "satire".

85. To write an essay discussing the concept of tragedy in the work of a given author.

86. To write an essay discussing the concept of comedy in the work of a given author.

87. To write an essay comparing the tragic concept of two different authors.

88. To write an essay comparing the comic concept of two different authors.

89. To write an essay discussing the relationship of an important symbolic element in a given work to the work as a whole.

90. To write an essay discussing the author's use of satire in a given work of literature.

91. To write an essay discussing the author's treatment of character in a given work of literature.

92. To write an essay discussing the author's use of diction to achieve atmosphere in a given work of literature.

93. To write an essay comparing the mood of one work of literature to the mood of another.

94. To write an essay discussing the style of an author as shown in several of his works.

95. To write an essay comparing the style of two authors.

96. To identify given quotations from a work of literature, commenting on their significance in a short paragraph.

97. To write an essay discussing the structure of an author's sentences.

98. To write an essay discussing the structure of an author's paragraphs.

99. To write an essay comparing the sentence and paragraph structure of one author to that of another.

100. To write an essay discussing specific techniques the author of a given work uses to achieve reality.

101. To write a parody of a given passage of prose.

102. To write a parody of a given passage of poetry.

103. To write a parody of a given passage from a play.

104. To write a selection imitating the style of a given work of literature.

GENERAL OBJECTIVE: DISCUSS THE CONFLICTS AND VALUES IN A GIVEN WORK OF LITERATURE

The student will be able:

1. To discuss orally the writer's purpose in writing a poem.

2. To discuss orally the writer's purpose in writing a play.

3. To discuss orally the writer's purpose in writing a work of fiction.

4. To discuss orally the writer's purpose in writing a work of nonfiction.

5. To select and discuss orally the climatic point of a work of fiction.

6. To select and discuss orally the climactic point of a work of poetry.

7. To select and discuss orally the climactic point of a given drama.

8. To discuss orally the conflict presented in a given work of literature.

9. To write an essay discussing the conflict presented in a given work of literature.

10. To discuss orally the role of the protagonist and antagonist in a given work of literature.

11. To write an essay discussing the roles of the protagonist and antagonist in a given work of literature.

12. To discuss orally the motivation of a character's actions in a given work of literature.

13. To write an essay discussing the motivation of a character's actions in a given work of literature.

14. To write an essay discussing the changes occurring in a major character in a given work of literature.

15. To write a paragraph which summarizes the dominant impression of a given work of literature.

16. To write an essay on the major theme in a given work of literature.

17. To select and discuss orally minor themes in a given work of literature.

18. To prepare a panel discussion on the major theme in a given work of literature.

19. To determine and discuss orally an author's attitude toward his society.

20. To write an essay discussing an author's attitude toward his society.

21. To discuss orally the author's choice of form for expressing a particular theme.

22. To write an essay discussing the author's choice of form to express a particular theme.

23. To select and discuss orally quotations which are significant in revealing the author's values.

24. To write an essay discussing quotaions which reveal the author's set of values.

25. To select and record in writing the significant ideas in a given work of literature.

26. To select and discuss orally episodes in a given work of literature which reveal the author's attitudes toward his world.

27. To select and record significant quotations from a given work of literature to support opinion as to the theme of that work.

28. To write an essay demonstrating how the minor themes in a given work of literature reinforce the major theme.

GENERAL OBJECTIVE: DISCUSS THE MAJOR THEMES IN LITERATURE

The student will be able:

1. To write a long essay comparing two major works and their treatment of the same theme.
2. To write an essay comparing the theme of one work of literature to that of another.
3. To write an essay discussing the conflicts facing several different characters in literature, citing specific examples from memory.
4. To write an essay discussing the concept of tragedy in the drama, citing specific examples from literature.
5. To write an essay discussing the concept of comedy in literature, citing specific examples from several works of literature.
6. To write an essay discussing the treatment of humour in literature, citing specific examples from several works of literature.
7. To write an essay discussing the theme of good and evil, using at least four major works of literature.
8. To write an essay discussing the theme of identity, using at least four major works of literature.
9. To write an essay explaining how three works of literature differ in their criticism of the society of that period.
10. To write an essay explaining how the social criticism of one period is related to that of another period, using literature as source material.
11. To write an essay comparing several poets' treatment of the same theme.
12. To prepare a panel discussion comparing several poets' treatment of the same theme.
13. To prepare a panel discussion comparing the treatment of the same theme in several different media.
14. To write an essay comparing the treatment of the same theme in several different media.
15. To discuss orally the relationship of a theme in literature to contemporary society.

16. To prepare a panel discussion relating a theme in literature to contemporary society.

17. To write an essay relating a theme in literature to contemporary society.

GENERAL OBJECTIVE: SELECT AND MAKE USE OF RESOURCE MATERIAL

The student will be able:

1. To use the card catalogue of the library to locate useful material.

2. To use the Reader's Guide and similar indexes to locate useful materials.

3. To use a specialized bibliography to locate useful material.

4. To use the vertical file to locate useful material.

5. To utilize specialized reference material, such as the Dictionary of Biography, etc., as needed.

6. To prepare a panel discussion on the history and development of the novel.

7. To prepare a panel discussion on the history and development of the short story.

8. To prepare a panel discussion on the history and development of the drama.

9. To prepare a panel discussion of the history of a literary or artistic movement.

10. To prepare a panel discussion showing how the life of an author may or may not be reflected in his work.

11. To prepare a panel discussion on the social milieu of an era.

12. To write an essay on the history and development of the novel.

13. To write an essay on the history and development of the short story.

14. To write an essay on the history and development of the drama.

15. To write an essay on the history and development of a poetic form.

16. To write an essay discussing the history of a literary or artistic movement.

17. To write an essay showing how the life of an author might be reflected in his work.

GENERAL OBJECTIVE: WRITE A CRITICAL ANALYSIS OF A WORK OF LITERATURE

The student will be able:

1. To develop a checklist for criticism.
2. To write an essay applying a checklist for criticism to a given work.
3. To write a critical review of a play.
4. To write a critical review of a novel.
5. To write a critical review of a television production.
6. To write a critical review of a film.
7. To write an essay evaluating a poem.
8. To write an essay evaluating a novel.
9. To write an essay evaluating a drama.
10. To write an essay evaluating a work of non-fiction.
11. To write an essay comparing and contrasting two works of literature.
12. To write an essay comparing and contrasting two authors' treatment of similar themes.
13. To write an essay comparing and contrasting the work of two poets.
14. To write an essay comparing and contrasting the work of two novelists.
15. To write an essay discussing the themes of one dramatist.
16. To write an essay discussing the themes of one novelist.
17. To write an essay which discusses at least three major works by the same author.
18. To write an essay tracing the use of a single theme in several works of literature.
19. To write an essay evaluating the point of view of the writer of a given work of literature.
20. To write an essay tracing the use of a literary device in several works of literature.
21. To write an essay comparing two writers' use of satire.

22. To write an essay on a writer's use of satire in a given work of literature.

23. To write an essay comparing and contrasting the treatment of "heroes" in several works of literature.

24. To write an essay making inferences about a particular period, drawing on the literature of that period.

25. To write an essay contrasting the tragic work of one age with that of another.

26. To write an essay contrasting the comic work of one age with that of another.

27. To write an essay comparing the judgment of several critics concerning a work of literature.

28. To write an essay explaining why a work of literature is considered a classic.

29. To write an essay justifying the inclusion of a work of literature in an anthology.

30. To make a written outline for a critical analysis of a given work of literature.

31. To write a critical analysis of a work of literature.

AMERICAN HISTORY - PHASE 3

GENERAL COURSE OBJECTIVES

Basic Behavioral Objectives

Declaration of Independence

The American Revolution

The Constitution

Political Parties and Philosophies

Democracy

Expansion of America

The Conflict Between the North and the South

Economics

Foreign Affairs

The Concepts of the Americans

Values

Current Problems in America

Ideology

Communism

War

Immigration

Presidents

Powers of the President, Supreme Court and Congress

BASIC BEHAVIORAL OBJECTIVES

The student will be able to:

1. Write a structured history essay.
2. Outline selected historical issues.
3. Write a research paper to demonstrate the ability to use proper mechanics.
4. Analyze orally and in writing.
5. Analyze and interpret orally and in writing selected documents.
6. Analyze in writing historians' interpretation of historical issues.
7. Locate (search out) or analyze primary resource materials related to given issues.
8. React orally to small group discussions of controversial issues as directed prior to the discussions.
9. Listen, to accept, and respond to questions voluntarily verbally, and/or when called on.
10. Differentiate in writing generalizations, analytical questions and concepts.
11. Demonstrate by writing generalizations as tools of research.
12. Determine the reliability by examining primary sources of the available historical evidence.
13. Consider specific examples that could be used to test validity of the hypothesis.
14. Given specific interpretations, state the ways a historian develops hypotheses as starting points for investigation.
15. Determine the values of forming and using hypotheses in studying history by forming a hypothesis and validating or invalidating it.
16. Debate whether or not evidence supports a hypothesis.
17 Distinguish among statements of facts, generalizations based on fact, and hypothesis.
18. Practice note-taking from reading.
19. Define and apply orally or in writing frame of reference.

20. Recognize frame of reference.

21. Assess a person's frame of reference and explain orally or in writing how it is a product of his life experiences.

22. Define and apply orally and/or in writing the meaning of analytical questions.

23. Define and apply orally and/or in writing the meaning of facts.

24. Extract factual data from personal documents and/or the text.

25. Assess the degree of factual accuracy in an article.

26. Use facts constructively in creative writing.

27. Use the historical method of establishing facts (how do we know what we know).

28. State how historians determine what is factually accurate by seeking corroborative statements from people with different frames of reference and validate validity of statements through external and internal evidence.

29. Determine by use of internal evidence whether facts reported in a document should be accepted as accurate.

30. Distinguish between fact and opinion.

31. Explain orally and in writing how facts and opinions shape history.

32. Take statements from documents and distinguish between fact and opinion as expressed by the writers.

33. Separate and use historical evidence to distinguish myth from fact.

34. Discuss orally the degree to which statements in an article are factually accurate, using internal evidence.

35. Determine by watching a demonstration whether factual evidence supports a particular hypothesis.

36. Examine several written and oral viewpoints on a controversial issue and formulate in writing and state an opinion.

37. Make generalizations on the basis of data extracted from personal documents and/or text and theme.

38. Observe and explain in writing the methodology of professional historians.

39. Develop in writing a hypothesis.

40. Ascertain by writing an analysis that historians support and revise hypotheses with factual evidence derived from documents and artifact.

41. Consider the limitations in developing the hypothesis by listing the available historical evidence.

42. Assess by questioning and explain in writing, or by debating: that most major events in history have multiple causes rather than a single cause.

43. Use the principle of multiple causation as a tool of analysis by writing a short research paper.

44. Demonstrate the use of library resources such as Reader's Guide, vertical file, interlibrary loan and other pertinent tools of research in writing or verbally.

45. Demonstrate before a class a prescribed method of oral presentation.

46. Demonstrate the assumption of responsibility by completing a 6 week contract that contains procedures, objectives, and goals.

47. Think critically orally by participation in class discussion.

48. Think critically in writing by completing a paper.

49. Recognize and identify orally and/or in writing American Institutions.

50. Participate in planned activities which relate to democratic principles and American Institutions.

51. Identify and organize by listing major ideas in an outline.

52. Identify and organize by listing major ideas in a summary.

53. Evaluate activities by completing group evaluation sheets and/or by answering orally specific questions concerning the activity.

54. Discuss work with fellow students in small group organization.

55. Experience by reading and inquiring the relevance of issues in American history because the reading is interesting and the issues and people seem real and important.

56. Present and discuss concepts and analytical questions as a guide as to what to look for in data.

57. Analyze in writing a narrative account.

58. Define by stating or writing assigned terminology.

59. Apply assigned terminology to a discussion.

60. Experience history by reading, writing, discussing and debating because it concerns recognizable human beings who faced problems similar to those students face in their own lives.

61. Complete associated readings and combine one's own experiences and purposes with materials read.

62. Criticize the selections.

63. Find illustrations of and exceptions to the author's statements.

64. Suggest research or classroom activities that cause response independently of subject matter.

65. State specified and clearly defined concepts.

66. Be able to read and analyze by writing or discussion such books as Lewis' Only Yesterday, Goldman's Rendezvous with Destiny, Lewis' Since Yesterday, Steinbeck's Grapes of Wrath, and S. Lewis' Babbitt.

DECLARATION OF INDEPENDENCE

The student will be able to:

67. Analyze in writing the Declaration of Independence.

68. Interpret the Declaration of Independence as to its significance of the period in which it was written and make written application to 20th century America.

THE AMERICAN REVOLUTION

The student will be able to:

69. Read selections from A Sense of the Past concerned with causes of the American Revolution and interpret this primary source material, and develop generalizations; present in a paper.

70. Read from Illustrated School History of the U.S. and The Adjacent Parts of America the selection "Taxation Without Representation" by George P. Quackenbos. List in writing the most important causes of the American Revolution.

71. Develop his own hypothesis orally and in writing: The Causes of the American Revolution.

72. Read the primary sources "An Interview with Captain Preston" and an excerpt from Dumas Malone on the Revolution; he will reexamine his original hypothesis and determine if it should be changed, then explain in writing.

73. Present orally in a panel discussion the Causes of the American Revolution.

74. Take notes and then ask probing questions concerning the Causes.

75. Formulate opinions and state orally these opinions concerning the Causes.

76. Develop a hypothesis and validate or invalidate by debate whether or not the American Revolution was a social movement or a political rights movement.

77. Debate and resolve: The founding fathers were radicals or conservatives.

78. Read and discuss the British point of view: The Colonies had no right to be angry over taxation and therefore had no right to revolt on these terms.

THE CONSTITUTION

The student will be able to:

79. Define and apply in written exercises the terminology related to understanding and interpreting the Constitution. Examples are: Bill of Attainder, ex post facto, due process of law, writ of habeas corpus, trial of jury, eminent domain, excise tax, duties and impost, letters of marque and reprisal, corruption of blood impeachment, quorum legal tender, capitation tax, bail, suit at law, suit in equity, delegated powers, reserved powers, double jeopard indictment, grand jury, republican form of government, and amendment.

80. Analyze the Constitution as an institution as to how it reflects values of the delegates orally and in writing.

81. Present a class play "To Form a More Perfect Union" to be discussed and analyzed what the delegates saw as their major responsibility.

82. Illustrate by acting the points on which the delegates agreed and disagreed.

83. Reveal in drama the values the delegates revealed.

84. State a hypothesis and debate that the Constitution was written with economic determination rather than political theory as expressed by Charles A. Beard.

85. State a hypothesis and debate that the Constitution was written to ensure political rights to the individual.

86. Debate which was the most devoted to the principles of the Preamble, Patrick Henry or James Madison.

87. Read Articles 1 - 7 of the Constitution and differentiate between these laws and values expressed in the Preamble.

88. Read Articles 1 - 7 and form an opinion as to whether he agrees with the values set forth in the Preamble in oral or in written form.

89. Take a poll of the class and faculty and tabulate the results to determine whether they agree or disagree with the values set forth in the Preamble.

90. Determine from this poll the most important values.

91. Analyze in writing why there would be a difference of opinion.

92. Discuss whether he thinks these values in the Preamble have been fully realized in American life today, and fully explain orally his answer.

93. Analyze the meaning of the Constitution as it relates to himself and others when given written exercises concerned with conflicts and law over the Constitution.

94. Develop in writing using readings from A Sense of the Past generalizations concerned with the problems of the Union and the adoption of the Constitution.

95. Analyze in writing the conflicts over the ratification of the Constitution as to why Patrick Henry opposed it and how James Madison met his arguments.

96. Explain in writing the Constitutional controversies such as debtor vs credo, large vs small states, states rights vs popular sovereignty.

97. Analyze by outlining the purpose and effects of the "Federalist Papers" upon the adoption of the Constitution.

98. Analyze in writing the amendments to the Constitution in light of extended democracy to all.

99. Interpret by discussion the amendment process as to our changing society.

100. Debate the legislation of a national amendment to lower the voting age.

101. Write a comparative analysis of the arguments for and against Congressional Reconstruction supported by selected documents.

POLITICAL PARTIES AND PHILOSOPHIES

The student will be able to:

102. Contrast orally (2 students) the philosophies of the two major political parties, the Republican and the Democratic.

103. Review the early years of the nation and present orally the current ideas about the role of government and political parties as they emerged in the period from 1787-1800.

104. Develop generalizations and present orally the early problems of parties and the responsibilities on the President.

105. Contrast in writing the past with the present concerning problems of the parties and responsibilities of the President.

106. Relate in a panel discussion the relevance of Thomas Jefferson's political philosophy to today's political trends.

107. Discuss orally the main issues on which Jefferson and Hamilton disagreed. This discussion should reflect the differences between their political philosophies.

108. State orally the similarities of their political philosophies.

109. Debate: Was Hamilton a realist or idealist. Include an analysis of his personality and actions.

110. Describe orally Washington's role in the conflict between Hamilton and Jefferson.

111. Outline the growth chronologically of American political parties after selected readings concerned with the Federalist Era, the Jefferson Era, and the Jacksonian Era.

112. Discuss orally whether common man's entry into politics was a result of the growth of the frontier.

113. Read and write a paper discussing the issues of the political campaign of 1828 and state suppositions as to why these things happened.

114. Construct in writing the campaign of 1968 and 1828 as to issues and practices.

115. Analyze the speeches of John F. Kennedy and list goals of "The New Frontier".

116. Contrast with the goals of "The New Frontier" the achievements and failures with "The Great Society".

117. Contrast in a panel discussion the ideas and aims of Roosevelt and Wilson by reading "The New Nationalism" (Roosevelt) and "The Old Order Changeth".

118. List the contributions of each to the Progressive Movement.

119. List and discuss in writing the aims of John F. Kennedy by reading "Inaugural Address", "American University Speech" and "Civil Rights Speech".

120. Read materials on the 1968 Presidential elections. Write a resume of each candidate to include the following points: his qualifications for the office; the possibility of his winning; emphasis on each candidate's platform.

121. Define in writing leadership.

122. Define leadership in comparative political systems.

123. Assess who are leaders as to personal characteristics and social backgrounds.

124. Answer orally how society recruits its leaders.

125. Answer orally how society persuades people to accept positions of leadership.

126. List rules, formal and informal, that society establishes for granting leadership.

127. List the things a person must do to keep leadership positions.

128. List the traits of people to whom he appeals.

129. Discuss orally how he appeals to these people.

130. List the ways he maintains support.

131. List the political issues of the 1968 campaign.

132. Write a paragraph of the objective treatment of each by the newspapers, magazines, and news broadcast.

133. Describe in writing how each state conducts elections as to the handling the electoral college votes and the primaries.

134. Analyze and suggest in writing improvements over the present nominating system.

135. Debate: The electoral college should be abolished and the President elected directly by the people.

136. Analyze the meaning by panel discussion of southern support of George Wallace and its possible effects of throwing the election into the House of Representatives.

137. Trace by outlining the states' rights issue by inquiring into the significance of the Kentucky-Virginia Resolution, the Hartford Convention, the Doctrine of Nullification (Exposition and Protest from D.C.), the Great Tariff Debate.

138. Debate: State Rights vs Federal Rights.

139. Write a critical analysis of the states' rights issue of the pre-Civil War struggle.

140. Discuss orally the states' rights issue today(i.e., the Wallace campaign).

DEMOCRACY

141. Define in writing the term democracy.

142. Define in discussion the basic concepts of democracy e.g. democracy is more than a form of government; it is a way of life which permeates every aspect of human endeavor. Democratic government rests upon democracy in other areas of life.

143. Discover by inquiry other basic ideas of democracy and state to the class orally and list.

144. List examples of what makes one society more democratic than another.

145. Define the term "standard" orally and in writing.

146. Develop a standard orally and in writing: how to measure to what degree a society is democratic.

147. Examine orally the standards he is using to measure democracy as to previous standards and pick out the most important measures.

148. Validate or invalidate by debate supported by extended research the hypothesis that democracy in early America was really a fiction.

149. Validate or invalidate by debate by using extended research the hypothesis that democracy in early America was a fact.

150. Inquire and list the contributions of the Puritans to American democracy.

151. Analyze Turner's Thesis as to democracy and the frontier orally and in written form.

152. Examine the Algier Hiss, Rosenburg, and Oppenhiemer cases orally and/or in writing to determine the problems of treason in a democratic society.

153. Analyze in writing the radical elements in a democratic society and discover the relevance of their existence, i.e. the abolitionist movement as expressed in the document "The First Issue of THE LIBERATOR" page 113 of Heffner's A DOCUMENTARY HISTORY OF THE U.S.

154. Define in writing the term "revolution".

155. Examine the phrase "revolution of 1800" and discuss orally if it was a revolution in the truest sense.

156. Determine whether there was a "revolution" in the 1828 election by applying in writing the definition of revolution.

157. Read Morrison, Commanger, Hofstadter, and Hicks concerning the election of 1828, then list in writing the reasons for the coming of "Jacksonian Democracy".

158. Compare orally the interpretations of Morrison and Commanger to those of Hofstadter and Hicks.

159. Debate whether the expanded role of the common man in government meant that democracy had grown.

160. Compare orally the common man of the past and present.

161. Discuss orally what kind of man was Andrew Jackson according to his opponents.

162. Read documents concerning Jackson, and determine by oral discussion if Jackson's opponents were correct.

163. Determine how he became President and write an essay.

EXPANSION OF AMERICA

The student will be able to:

164. Trace orally America's fulfillment of "Manifest Destiny".

165. Write a paper comparing the entry of new states into the Union and America's acquisition of territory.

166. Discuss orally how the attitude of national leaders could have contributed to westward expansion.

167. List in writing the national leaders' reasons for expansion.

168. Read a document by James Madison, 1785, and analyze in writing who owned the western lands, what was the source of their rights, and how could such beliefs influence expansion.

169. Differentiate in writing between strict and loose interpretation of the Constitution as to acquisition of new lands.

170. Review Jefferson's reasons for purchasing Louisiana and compare with the provisions of the Constitution for the purchase of new territory.

171. Discuss orally whether or not Jefferson used a strict or loose interpretation of the Constitution (review the Constitution).

172. Read Jefferson's second Inaugural Address and list his reasons for the Louisiana Purchase.

173. Read Selected documents concerned with the reasons for westward expansion and explain in writing the justification for certain historical actions by individuals as well as the nation.

174. Use the Turner thesis and criticism to prepare a paper to interpret the "Role of the American Frontier in American History".

175. Discuss orally the meaning of "America's Quest for Utopia - 1825 - 1850".

176. Read excerpts from selected documents, novels, and movies which depict the image of the West and discuss as to traits, appeal and fact and/or fiction.

177. Discuss what Brinkerhoff (1845) and Turner (1895) thought the appeal of the West was.

178. List the motives for going west as expressed by these two men.

179. Explain in writing whether individualism was a realistic value for a settler in the west.

180. List the traits deemed necessary for success in the West as expressed by Turner and Brinkerhoff.

181. Identify and list the values that emerged from the West by reading the two solutions by Brinkerhoff and Turner.

182. Debate the hypothesis set forth by Turner that the frontier was responsible for the growth of democracy during the first half of the 19th century.

183. Contrast orally what is known about eastern and western democracy.

184. Validate or invalidate by debate the hypothesis that: the U.S. waged the Mexican War in order to fulfill her manifest destiny.

THE CONFLICT BETWEEN THE NORTH AND THE SOUTH

The student will be able to:

185. Read and analyze selected materials such as the Lincoln Douglas debates and list the differences between the North and the South.

186. Discuss how these points of difference relate to the coming Civil War.

187. Explain in writing (from these materials) how people feel about these differences.

188. Discuss whether or not these differences could lead to war.

189. Debate whether these differences made the war inevitable and why.

190. Examine the events such as Northwest Ordinance of 1787; Missouri Compromise, 1820; Compromise of 1850; Kansas-Nebraska Act; the Dred Scot Decision, 1857; and discuss whether these events made the war inevitable.

191. Emphasize in writing, from his frame of reference, the cause for most northerners going to war.

192. Point out in discussion when this cause became the leading issue.

193. Hypothesize and debate as to whether the South's threat to this concern was the major reason for the war.

194. State in writing generalizations the attitude of each section towards Lincoln's ideas in "A House Divided, 1858".

195. Prepare and write an extensive research paper to present the multiple causes of the Civil War.

196. Debate whether the Civil War was an irrepressable or repressible conflict.

197. Analyze and discuss the election returns of 1860 and how they reflect the mood of the nation.

198. Read the "Webster-Hayne Debates" and analyze orally and in writing the nature of the Union.

199. Recognize and discuss that the major objective of Lincoln's declaration of war on the South was to preserve the Union.

200. Read selected parts of A SENSE OF THE PAST that are concerned with the forces for union and disunion and form in writing generalizations of this primary source.

201. Write a critical analysis of the slavery problem in the U. S. as a cause of the Civil War.

202. Read and state Lincoln's position regarding the problem of slavery in "A House Divided, 1858".

203. Debate whether the South's attitude can be justified or if it was an internal defense.

204. Debate whether the North's attitude and motives can be justified or if the pro-slavery argument was external aggression.

205. Analyze in writing The Emancipation Proclamation.

206. State the promise Lincoln made in the proclamation.

207. State the Union's position in the war when Lincoln issued the proclamation.

208. List reasons for Lincoln's action.

209. List the effects the proclamation had on the South, the North and other nations.

210. Define in writing abolitionist.

211. Read certain documents and state the attitude of most northerners towards the abolitionist cause.

212. Debate whether or not slavery was a primary cause of the Civil War.

213. Debate whether or not the point of view as to the cause of the war had changed.

214. Read the Fugitive Slave Law of 1793, Underground Railroad, Personal Liberties Laws and list the reaction of the North and South.

215. Read and analyze selected documents dealing with the treatment of slaves.

216. Determine by his own selected acceptable methods which documents are most reliable and list them.

217. Read the Slave Codes of 1820 - 1860 and explain the increased severity of the codes and the need of them.

218. Read selected documents concerned with Southern attitudes and write a hypothesis as to Northern reaction.

219. Read and analyze in writing the document "John C. Calhoun on the Slavery Question" page 118 (Heffner's A DOCUMENTARY HISTORY OF THE U. S.) to contrast the South's justification of slavery with the North's strong opposition.

220. Analyze in writing "The Gettysburg Address".

221. Discuss in small groups the extension of democracy in Lincoln's "The Emancipation Proclamation" and "The Gettysburg Address".

222. State the major goal of the North as Lincoln emphasized it.

223. Debate whether this goal grew out of the most important issues that led to the war.

224. Discuss orally which issues of the war were decided in the North's favor.

225. Read and analyze the Thirteenth Amendment, 1865 and discuss orally if it was necessary.

226. Write a critical analysis of conflicting attitudes toward Reconstruction by reading "Abraham Lincoln's Second Inaugural Address".

227. Research documents to determine why Congress established new requirements for the South rather than accepting Lincoln's Plan for Reconstruction.

228. Analyze in writing the Fourteenth Amendment and state the reasons why all the states but Tennessee rejected it.

229. Explain in writing why the Radical Republicans felt it necessary to propose the Fifteenth Amendment.

230. Debate to determine if there was a connection between Congress' program for Reconstruction and the issues that led to the Civil War.

231. Read extensively materials on the Civil War and Reconstruction and prepare a research paper to determine whether all the problems were solved by the war emphasizing specific problems.

232. Prepare a paper on The Effects on Reconstruction on the Southern white and the Southern Negro.

233. Debate whether radical Reconstruction in the South was a blackout of honest government or a battle for democracy.

234. Analyze the aims and objectives of the Radical Republicans in the Post-Civil War era and prepare a paper presenting the immediate and far reaching results.

235. Write a critical analysis of "The New South".

236. Write a critical analysis of the Reconstruction Era and its relation to 19th and 20th Century attitudes.

ECONOMICS

The student will be able to:

237. Define in writing wealth as it relates to the individual and society.

238. Define the concept of money and how it relates to salary, medium of exchange, measure of values, store of value, the mystique of money as power, control, and status.

239. Inquire into the American free enterprise system and discover its mechanism as it relates to the Federal Government's control over its activities and prepare a paper to present the findings.

240. Experiment and inquire into the Federal and state taxation systems, and apply it to individual needs of an employed citizen and present to the class orally.

241. List the use of state and Federal taxes.

242. Study statistics that are concerned with industrialization during the 19th Century and explain in writing if the term "revolution" could be applied to any of these developments.

243. State Andrew Carnegie's definition of"businessman" after reading "How I Served My Apprenticeship as a Business Man".

244. Define in writing the term capitalist".

245. Inquire into the Capitalist system and apply the terms such as inflation, deflation, stock market, margin buying, recession through various classroom activities.

246. Read and analyze articles by Carnegie and Rockefeller and state in writing the business man's reaction to the industrial boom.

247. Develop a hypothesis about big business combinations from 1865 - 1900 and explain how it might have affected the American people.

248. Read several primary sources and interpretations concerned with industrialization, list the kinds of character traits and behavioral traits that wealthy people and their spokesmen seemed to admire.

249. Decide wheter the term "individualistic" can be applied to any of the wealthy businessmen by reading biographical data.

250. List the values of these wealthy people and determine whether these values have been observed prior to 1865.

251. State orally a generalization in which you share these values.

252. Define "Social Darwinism" by reading excerpts from William G. Sumner, John D. Rockefeller, and Andrew Carnegie.

253. State in writing what Sumner, Rockefeller, and Andrew Carnegie think about competition in relation to society.

254. State in writing how he would defend the position of Rockefeller and Carnegie with further arguments.

255. State in writing how each man defends his views.

256. Analyze in writing laissez-faire in relation to the Gilded Age as a supporter of this idea.

257. Determine if he shares the values behind the ideas of the Gilded Age and give a written explanation.

258. Interpret and apply in writing the ideas of such economists as Adam Smith, Robert Owen, John S. Mill, Karl Marx, Henry George, Thorstein Veblen, John M. Keyes, Wesley C. Mitchell.

259. Understand and analyze the meaning of big businesses' use of monopoly. Prepare a paper based on Henry D. Lloyd's "A Great Monopoly" and Wilson's speech on monopolies.

260. Read Andrew Carnegie's "Wealth" and in writing analyze the so-called "Robber Barons" justification of big business and non-government intervention.

261. Analyze several selected articles that are critical of big business and in writing show why the values of the critics were the same as those they attacked and include an explanation of what the critics were really attacking.

262. Read documents by three senators who opposed prohibition and child labor.

263. Explain the arguments these three senators used to defend child labor.

264. State orally what these three senators were trying to preserve.

265. Debate to accept or reject their values.

266. Debate the position of federal regulation of child labor.

267. Write a historical essay defending his position concerning the federal regulation of child labor.

268. Develop a hypothesis concerned with whether or not the Industrial Revolution was "good" for America.

269. Describe the effect of industrialism upon the growth of American institutions.

270. Analyze sources concerned with child labor and contrast in writing the values held by each source.

271. Analyze in writing the labor laws that were passed during the Wilson administration.

272. List the reasons these laws were passed with an explanation of each.

273. Outline the history of Labor Unions.

274. Write a paper on "The Power of Labor Unions Today".

275. Write a brief historical essay on "The Development of Railroads". Include their influence upon the settlement of the West; the plight and struggle with the farmer; the expanding government regulations.

276. Research from a given source the business cycles and explain in writing the causes of depressions, regressions, inflations.

277. Inquire into the growing role of government regulation of big business and idea of planned economy as an answer to inflation and discuss orally.

278. Research a given source and explain what could be done to control business cycles.

279. Explain how gross national production is related to consumption, investment and government expenditure.

280. Read certain documents concerned with the Great Depression of 1929, list the causes.

281. Read certain documents concerning the Depression of 1929 and explain in writing the conditions which emerged because of business failure and resulting unemployment.

282. Identify and list the weaknesses that existed in the structure of the government and management relations emphasized by the Depression of 1929.

283. Analyze in writing the Anti-trust Movement after reading selected documents and a historian interpretation of these concerned with the Corporation.

284. Read selected documents concerned with the Square Deal and the New Freedom, discuss orally the changing attitudes of the "average" American and the older rich American toward government regulations of business practices in the interest of the public good.

285. Discuss orally the changing attitudes toward government and business; industrialism or an Agarian society; the new America created by the new wave of immigrants to cities.

286. Read Herbert Hoover's "Rugged Individualism"; F. D. Roosevelt's "First Inaugural Address"; "NLRB vs Jones and Laughlin Steel Corporation" for information to support the above discussions.

287. Develop a written essay to defend "The Sudden growth of industry fostered the same traits and values in Americans that the frontier had encouraged.

288. Develop and write an essay, using his frame of reference and selected source material on "What an individual must do to achieve economic success in the industrial age" and compare his ideas with those of the 19th Century.

FOREIGN AFFAIRS

289. Analyze the Monroe Doctrine, 1823, and discuss orally the following points:

    a. What did Monroe imply about the position of the U. S. concerning the rest of America by proclaiming the doctrine.
    b. What did the doctrine have to do with expansion.

290. Read selections from A SENSE OF THE PAST concerned with foreign entanglements, write a paper to develop his frame of reference concerning foreign policy prior to 1815.

291. Read background material concerning the acquisition of territory between 1803-1853 and answer orally whether fears similar to those that prompted the proclamation of the Monroe Doctrine have inspired any of the Acquisitions. If yes, discuss orally which ones.

292. Discuss orally America's involvement in imperialism during the early part of the 20th century as to acquisition of territories as well as expanding responsibilities as a world power.

293. Read and then write the new interpretations of American Foreign Policy. Supporting materials are: the text as a frame of reference for the 20th Century policies of T. Roosevelt, W. Wilson, F. D. Roosevelt, Truman, Eisenhower, Kennedy, and Johnson and documents found in Heffner's DOCUMENTARY HISTORY OF THE U. S.

294. Analyze and interpret in writing the "revisionist" literature of the 1920's and 30's and explain how it contributed to disillusionment and isolationism.

295. Read and interpret orally Commanger's pamphlet "How Not to be a World Power".

296. Contrast the changing from isolation expressed in Washington's Farewell Address to a world power as expressed in Alfred T. Mohan's 1890 speech "The U. S. Looking Outward" and Franklin D. Roosevelt's "Four Freedoms" speech of 1941.

297. Analyze and apply in writing the Monroe Doctrine to the following: Spanish American War, American Imperialistism, the Cuban Crisis, intervention in the Dominican Republic, intervention in European problems.

298. List from reading given documents the reasons why America remained isolationists during the rise of dictators in Europe.

299. Debate to invalidate or validate the hypothesis that Wilson did not pursue a policy of neutrality prior to American intervention in World War I.

300. Debate to invalidate or validate the hypothesis that Wilson did pursue a policy of neutrality prior to America's entry into World War I.

301. Analyze and explain orally why America went to war (WWI) as expressed in Wilson's speech "The War Message to Congress (1916)".

302. List the conflicting attitudes of Americans who wanted to remain isolationists and those who favored the U. S. entry into World War I.

303. Write a critical essay on the Senate struggle over the Versailles Treaty i.e. Lodge vs Wilson.

304. Write a critical essay on the Senate struggle over the Versailles Treaty i.e. Lodge vs Wilson.

305. Analyze a document which explains the German version of the Treaty of Versailles and state it in writing.

306. List the reason(s) Germany objected to the Treaty of Versailles.

307. Examine Article X in light of Lodge's and Wilson's stand and state orally and/or in writing with whom he agrees and why.

308. Read and write a resume of Thomas A. Bailey's assessment on the League of Nations.

309. Write an essay explaining what Bailey thought was the mood of the Nations after W.W.I.

310. State an opinion as to how this mood was likely to affect the Congressional vote on the U.S. joining the League.

311. Relate orally the mood of the nation to the arguments of Lodge and Borah.

312. Write a paper from his hypothesis stating whether or not the U. S. should or should not have joined the League.

313. Determine by reading documents and interpretative sources, whether or not the rise of dictators is related to the failure of the League of Nations.

314. Contrast orally the League of Nations with the United Nations as to structure and historical necessity.

315. Read four documents concerned with Germany, Italy, and Japan and discuss what happened to these countries from 1918-1939.

316. Read selected documents concerned with Germany, describe in writing a pattern emerging which led to World War II.

317. List the causes of World War II from these documents.

318. State orally a generalization about U. S. reaction to these events.

319. State orally a generalization if the reaction of the U. S. would have been different than before W. W. II.

320. Read a document of Franklin D. Roosevelt's and compare his generalization with Roosevelt's reaction.

321. Contrast in writing Roosevelt's reaction with Wilson's reaction prior to World War I.

322. Read selected documents and summarize in writing the U. S. position during the years leading up to Dec. 7, 1941, as stated by the President.

323. Validate or invalidate by debate that F. D. Roosevelt maneuvered the Japanese into an attack on Pearl Harbor in order to involve the U.S. in World War II.

324. Analyze the decision made by the leading powers during the war and discuss in writing if these decisions were wise.

325. Read interpreting primary source material in historian's interpretation the hypothesis that the Yalta Agreement was surrender to Russia and is basically responsible for the Cold War. Develop the hypothesis in a research paper.

326. Develop in writing the hypothesis that the Yalta Agreements were wartime realism.

327. Summarize in writing "The Atlantic Charter" as an end to isolation.

328. Read and analyze orally the document, "The Marshall Plan", by George C. Marshall, the roots of the Cold War relationships.

329. Develop in writing a research paper the hypothesis that MacArthur was right concerning the steps that should be taken by the U.S. on subduing Red China and the results of Truman's policies had further involved the U.S. in southeast Asia.

330. Write a paper supporting the hypothesis that Truman made the only choice available to him by dismissing MacArthur because of MacArthur's high handed aggressiveness which would have involved the U.S. in a war with Red China.

331. State in writing the original motives for the alliance system, NATO, SEATO, etc. to determine their effectiveness and purposes.

332. Determine and indicate in writing whether these meetings and resolutions changed the U.S. attitude toward foreign affairs.

333. Discuss orally his answer.

334. Write a brief statement to analyze America's entry to the United Nations.

335. State his opinion as to how and why the U.S. became a world power after a review of the history of the U.S. from 1898-1946.

336. Read documents and list the reasons the U.S. became involved in the Korean Crisis.

337. Analyze the problem of U.S. involvement in Southeast Asia and write a paper stating whether the motives are political or economic.

338. Write a criticism of America's method of extending foreign aid.

339. Analyze and state orally America's motives for extending foreign aid.

340. Debate whether America should be "The Policeman of the World" or return to a more moderate isolate.

341. Develop a paper discussing Russia's and the U.S.'s motives for opposing a straight vote of 9 members in the Security Council, ruling out the need of the Big Five to pass action when a crisis arises.

342. Debate and resolve: Red China should be admitted to the United Nations.

343. Discuss orally and objectively the existence of the State of Israel.

344. Trace chronologically orally the relationship of the U.S. and China to ascertain the antagonisms which exist today.

345. Debate the pro and con of U.S. involvement in Vietnam.

346. Contrast in a panel discussion the "manifest destiny: formation of new states in Africa, Southeast Asia, and the role of imperialism.

347. Write a critical analysis of achievements of the U.N.

348. Write an analysis of the weaknesses of the U.N.

349. Write a criticism of the U.N. and preserving future world order.

THE CONCEPTS OF THE AMERICANS

The student will be able to:

350. Define in writing the term "individualism".

351. Discuss orally the role of the individual in society today as to limits of individualism and effects.

352. Cite orally examples of individualism.

353. Contrast in writing the frontiersman, the farmer, and the city dweller.

354. Relate in a panel discussion change in society to individualism today.

355. List in the order of importance what Americans feel are important and what they enjoy. References: Documents that concern Ben Franklin, Thomas Jefferson, Timothy Dwight, the Shakers Mountain Men, Louisiana Planters, Boston Society.

356. Draw conclusions and state in writing the characteristics of Americans.

357. Compare in writing the characteristics of the American personality today.

358. Analyze and discuss orally a portion of the document by Lt. John Crevecoeur on America.

359. Contrast in writing what Crevecoeur saw in the American personality and what Americans see.

360. Determine and state orally what Crevecoeur thought was America's most important quality.

361. Contrast orally Crevecoeur's and Franklin's ideas on America.

362. Determine orally what Crevecoeur thinks an American is and what the basis for his conclusions are.

363. Determine in writing based on readings from America from 1800-1860 "What is an American".

364. Define in writing "folklore".

365. Analyze assigned folklore and write a paper on the contribution to shaping of the American character.

366. Recognize whether or not we have folklore and list in writing examples.

367. Discuss orally the role of folklore in writing American history.

368. Read Tocqueville's observations and list traits displayed by pioneers.

369. Discuss in writing what Americans thought about wealth after reading Von Raumer's description.

370. Compare orally Von Raumer's ideas with those of de Tocqueville.

371. Discuss in writing how Americans were seen by foreigners in 1800-1860.

372. List the traits that have lasted in American character.

373. List which traits are no longer important.

VALUES

The student will be able to:

374. Define in writing the meaning of values.

375. Write what he believes is his own concept of values.

376. Evaluate the traits described by Brinkerhoff and Turner as to admiration by Americans and discuss in writing whether such characteristics have become American values.

377. Read selected readings from A SENSE OF THE PAST and analyze in writing primary source material that is concerned with reform and reformers of the first half of the 19th century.

378. Define in writing the word prejudice and discuss orally using objective reasoning one's feelings toward minority groups in the U.S.

379. Prepare a paper and differentiate between society and law. Include such ideas as every society creates law, governments are established by men, democracy seeks to protect the rights of individual and minority groups, citizenship involves active participation in the process of governing, all kinds of government are interdependent.

380. Analyze the current trends in civil disobedience and contrast in writing Thoreau's "Civil Disobedience".

381. Interpret the meaning in writing of the "Red Scare" of 1919 and contrast it to the McCarthy Era of 1950's.

382. View and analyze the film "The Golden Twenties". Discuss in writing the disillusionment and prosperity of that era; the Red Scare, the Sacco-Vanzetti Case, the Ku Klux Klan, Scopes Trial, "The Tired Liberals.

383. Further analyze the progressive movement and list in writing its accomplishments and defeats. References: Riordan's "Honest Graft", Bryce's "The New Immigration", and Ginger's "A New Negro".

384. Analyze the role of the Muckraker literature on Progressive legislation at the turn of the century. Reference: Walter Lippmann's "The Muckrakers".

385. Analyze in writing the relevance of such radical elements as the Radical Republicans of the Reconstruction Era, the Copperheads, and the Know-Nothing Party.

386. Contrast in writing the radicals of the 19th Century to radical groups of the 20th Century. Include the aims, ultimate objectives, methods used to obtain objectives i.e. Communist, John Birch Society, the Ku Klux Klan, Minutemen, Facist, American Civil Liberties Union, and Americans for a Democratic Society, etc.

387. Study documents and other selected sources for inquiring into the role of minority groups in American culture such as the Negro, the Jews, Puerto Ricans, Indians, lower European immigrants.

388. Trace his ancestors to determine why they came to America and write a comparative essay of their values and 19th Century (or 20th) values.

CURRENT PROBLEMS IN AMERICA

The student will be able to:

389. Present in a panel discussion the problem of population explosion.

390. List in writing ways population can be controlled.

391. Recognize and list the concepts or features common to all communities.

392. Read current literature and prepare a paper on each of the following problems: growth of cities, air polution, unemployment, the growth of technology and related problems.

393. Analyze and present in writing proposed solutions to the ghetto problem.

394. Analyze and present in writing effects of the recent Supreme Court ruling on open housing.

395. Read Bagdikian's "Poverty in the Midst of Plenty"; and analyze in writing why poverty exists in the midst of plenty.

396. Read Bagdikian's "Poverty in the Midst of Plenty"; and analyze in writing why poverty exists in the midst of plenty.

397. Analyze the Selective Service System and recent court rulings and debate: The drafting of individuals when there is no declared war.

398. Analyze the causes of general lawlessness and present in a panel discussion. Use primary source material to identify groups involved,

399. Read current literature concerned with the role of the mod influence on American society as to groups involved. List in writing their characteristics and their significance.

400. Present in a panel discussion the problems of drugs and drug regulations. Include types of drugs, their harmful effects, government regulations and suggested solutions to the problems.

401. Write a critical analysis of the regulations of firearms by the government.

402. Present in a panel discussion an analysis of the following social reforms: Social Security, TVA, Medicare, guaranteed income, welfare payments, unemployment payments and other government social legislation.

403. Inquire into the local institutions of Melbourne and criticize orally the citizenship gap. He will observe law enforcement, basic law necessary to formulate contracts, individual rights before the courts, etc.

IDEOLOGY

The student will be able to:

404. Define in writing "ideology".

405. Interpret the belief shared by most people in society the basic beliefs about man and society.

406. State sources of those beliefs.

407. State the values that members of society hold.

408. State what influence ideology has on decision as to how power should be used.

409. Debate: political decisions attempt to promote the goals and values of people in a society.

410. Differentiate between opposing ideologies in existence in the 20th Century by applying the terms conservatism, radicalism, liberalism, reactionary, right wing and left wing.

411. State basic differences in totalitarian ideologies and democratic ideals.

412. Given materials for background reading, interpret orally and/or in writing the rise of Fascism and Communism as opposing ideologies.

COMMUNISM

The student will be able:

413. Recognize definitions and significance of a given list of terms related to Communism.

414. Interpret orally and in writing the ideas of K. Marx.

415. Recognize facets of Communistic strategy.

416. Analyze and contrast orally and in writing the World Communist Movement.

417. Differentiate between Americanism and Communism by debate, writing, and/or discussion.

418. Analyze assigned documents in writing and/or orally the struggle for economic and political control of Socialism and Communism in modern America.

WAR

The student will be able to:

419. Research in selected materials and list the issues and problems that cause wars between nations.

420. Present in a panel discussion these issues and problems.

421. Analyze in writing methods of disarmament and the consequences.

422. Interpret orally arms control as it relates to 1968 and the future.

423. Describe the nature of war today as to weapons, nations' problems of control and enforcement, etc.

IMMIGRATION

424. Identify in writing the term "immigrant".

425. Read quotes from Oscar Handlin and a poem by Emma Lazarus, he should role play an immigrant to America in 1890.

426. Read selected readings concerned with immigrants and list in writing the reasons why immigrants came to America.

427. Read these primary sources and list the problems found by the immigrants after they arrived in America.

428. Read current immigration laws and in view of past legislation discuss orally why attitudes are changing.

PRESIDENTS

429. Formulate judgments based upon selected materials, and write or state them.

430. Make evaluations based on certain criteria and write the evaluations.

431. List the traits that make an individual a good president.

432. Debate whether the following men were "good" presidents:
John Adams - based on "Thoughts of John Adams"
Thomas Jefferson - based on selected documents based on motives and action
Andrew Jackson - based on motives and actions

433. Debate whether a President of the U. S. should carry out revolutionary policies.

434. Debate whether there should be limits on President's revolutionary policies.

POWERS OF THE PRESIDENT, SUPREME COURT, AND CONGRESS

435. Differentiate between the powers exercised by the President, the Supreme Court, and the Congress.

436. Contrast and compare Jackson, Lincoln, Theodore Roosevelt, Wilson, Franklin Roosevelt as to their contributions to developing and expanding the powers of the Presidency.

437. Analyze in writing the documents "FDR and the Supreme Court" and "Defect of the Court-Packing Proposal" and determine the role of the Supreme Court, its powers; and the ultimate change in the Supreme Court's complacency; the President's motives, his powers

438. Examine and analyze in discussion the changing Supreme Court as it relates to riots, law and order; gun control, the courts, police power, civil liberties, etc.

439. Analyze by outlining Supreme Court cases concerned with separation of church and state, i.e. Engel et al. v. Vitale, Jr. (1962), Abbington School district v. Schempp (1963), West Virginia Board of Education v. Barnette.

440. State and discuss changed or changing attitude toward the Negro in America by reading Chief Justice Earl Warren for the Supreme Court Segregation Decision.

441. Debate the legality and encroachment upon individual rights of the Supreme Court ruling on open housing.

442. Analyze by discussion the significance of such Supreme Court cases and how they relate to civil liberties, i.e. Ex Parte Milligan Slaughterhouse cases, Civil Rights cases (1883), Plessy V. Ferguson, Smith v. Allright (1944) Brown v. Board of Education of Topeka (1954).

443. Analyze in writing such cases as Marbury v. Madison, Dartmouth College case, McCulloch v. Maryland, Gibbons v. Ogden, Barron v. Baltimore, Dred Scott v. Sanford to show rulings of John Marshall to strengthen the Federal government.

444. Debate capital punishment in view of the recent Supreme Court ruling concerning jury selection.

445. Identify the meaning of the term "image" in writing.

446. Cite examples of "images" and apply them in discussion to America.

447. Identify the term "jazz age" in writing.

448. Read and analyze 10 major decisions of American Presidents and interpret their significance in writing.

449. Recognize specific turning points in American history, and through research and disucssion analyze the results.

450. Draw from his own frame of reference and recognize orally 35 great decisions. Example: Colonies, or a separate nation.

451. Recognize by name and discuss orally the significant historians that we are concerned with interpretation of American issues. The discussion should include qualifications and backgrounds of the following historians: George Bancroft, Charles A Beard, F. Jackson Turner, Wesley F. Craven, William Randall, Carl Becker, Edmund S. Morgan, Arthur Schlesinger, Sr., Richard Hofstadter, Philip Davidson, Arthur S. Link, Samuel E. Morrison, Henry S. Commanger, and Clinton Rossiter.

452. Define in writing the term "conflict".

453. Give orally solutions by resolving conflicts.

454. Determine and report in writing what action would be in his best interest and whether there would be any advantage in agreeing to live peacefully under the Constitution if given "Resolve your conflict with the leaders who controlled the government who would act against what you considered your best interest and you disagreed with the way the government was structured.

455. Discuss orally whether violating the law ever is in a group's best interest.

456. Debate whether or not violation of the law is for the best interest of opposing groups.

457. Recognize several groups that are in opposition to one another and analyze in writing the motives of each group.

458. Recognize and interpret in writing the significance of each of a given list of factors and events leading to historical events.

459. Define in writing the term "citizenship".

460. Exercise citizenship after discussing orally how a citizen influences how public power is used. The citizen's role in the decision making process; how he obtains access to decision-makers, what influence does he have over them, how does a citizen get information about government, how does government affect the life of a citizen, how does it restrict his freedom, and how does he enlarge his freedom.

461. Identify and dis cuss orally that continuity and change characterize progress.

462. Read current literature and analyze orally the contributions of the following to recent trends: The Progressive Movement 1900-1920; The meaning of the 1920-1930's; The New Deal Philosophy; Social legislation since the New Deal.

MODERN MATHEMATICS I & II - PHASE 2

GENERAL COURSE OBJECTIVES

Whole Number Numeration

Addition of Whole Numbers

Subtraction of Whole Numbers

Multiplication of Whole Numbers

Division of Whole Numbers

Fractional Numeration

Subtraction of Fractions

Multiplication of Fractions

Division of Fractions

Numeration and Operation of Decimals

Percentage

Formulas

Denominate Numbers and Measurement

Business Mathematics

GENERAL OBJECTIVE: WHOLE NUMBER NUMERATION

The student will be able to:

1. Circle whole numbers from any mathematical grouping.
2. Write a number from a given word statement.
3. Write a word sentence from a given number.
4. Place whole numbers on the number line.
5. Examine the importance of place-value by positioning a given whole number in different places.
6. Compare the values of the whole numbers, after objective 5, by listing them in order of magnitude.
7. State or write the place-value of a particular digit through 1,000,000, given a number of more than one digit.
8. Round off whole numbers to the nearest place asked.
9. Round off whole numbers according to a specific number of significant figures.
10. Write the numbers immediately preceeding and following a given number in counting sequence.
11. Write the number or numbers between any two given numbers where the given numbers are at least two units apart.
12. Write the symbols for less than.
13. Write the symbol for greater than.
14. Supply either in written form or orally either   or   in a given mathematical statement.
15. Circle odd numbers from any grouping of whole numbers.
16. Circle even numbers from any grouping of whole numbers.

GENERAL OBJECTIVE: ADDITION OF WHOLE NUMBERS

The student will be able to:

17. Rewrite any given number in terms of addends.

18. Express, by positioning on the number line, the sum of any two one digit addends.

19. Write the sum for two addends of one digit in column notation.

20. Write the sum for two addends of one digit in line notation.

21. Rewrite a given number in addends of powers of 10.

22. Write the sum after doing objective 21.

23. Round off the sum of whole numbers to any place-value.

24. Write an addition problem, given in line notation in column notation.

25. Write the sum of two or more addends of one digit in column notation.

26. Write the sum of two or more addends of one digit in line notation.

27. Write the sum for two addends of two digits in column notation, where it is not necessary to carry.

28. Write the sum for two addends of two digits in line notation, where it is not necessary to carry.

29. Write the sum for two addends of two digits in column notation, where it is necessary to carry.

30. Write the sum of three or more two digit addends in column notation, where it is not necessary to carry.

31. Write the sum of three or more two digit addends in column notation, where it is necessary to carry.

32. Write the sum of two addends of three or more digits in column notation, where it is necessary to carry.

33. Write the sum of three or more three digit numbers in column notation, where it is necessary to carry.

34. Write the sum of three or more addends with a varying number of digits in column notation, where it is necessary to carry.

35. Check addition problems by adding in the reverse direction.

36. Circle the problem having the least sum when given several addition problems.

37. Circle, when given several addition problems, the problem having the greatest sum.

38. Circle, when given several addition problems and a specific number, the problem having a sum that is greater than the given number.

39. Circle, when given several addition problems and a specific number, the problem having a sum that is greater than the given number.

40. Demonstrate the associative axiom, by writing in the missing addend, when given a statement of equality, where the terms are addends.

41. Write in the missing addend in a statement of equality that will demonstrate the commutative axiom.

42. Write = or ≠ in a statement of addition.

43. Correct any ≠ statement in objective 42, by replacing one addend by another number that will make the statement true.

44. Write word statements of sum in the proper mathematical symbols, then add.

GENERAL OBJECTIVE: SUBTRACTION OF WHOLE NUMBERS

The student will be able:

45. Write the additive inverse of a number.

46. Demonstrate subtraction as the inverse of addition, by using the numberline and marking off the given numbers to find the difference.

47. Name, by placing in proper position, the minuend.

48. Name by placing in proper position, the subtrahend.

49. Name, by placing in proper position, the difference.

50. Subtract a one digit number from a one digit number in column notation.

51. Subtract a one digit number from a one digit number in line notation.

52. Subtract a one digit number from a two digit number in column notation where it is not necessary to borrow.

53. Subtract a one-digit number from a two digit number in line notation, where it is not necessary to borrow.

54. Subtract two numbers in column notation, where the sum of the subtrahend and difference is less than 20.

55. Subtract two numbers in line notation, where the sum of the subtrahend and difference is less than 20.

56. Subtract in column notation, two numbers of two or more digits, where it is not necessary to borrow.

57. Rewrite a subtraction problem that is given in line notation in column notation observing proper place value.

58. Subtract a one digit number from a two digit number in column notation where it is necessary to borrow.

59. Subtract in column notation a two or more digit number from a two or more digit number, where it is necessary to borrow.

60. Check subtraction problems by adding the subtrahend to the difference, the res-lt being the minuend.

61. Round off the difference to a requested place-value.

62. Circle, when given several subtraction problems, the problem having the greatest difference.

63. Circle, when given several subtraction problems, the problem having the least difference.

64. Circle, when given several subtraction problems and a specific number, the problem whose difference is greater than the specific number.

65. Circle, when given several subtraction problems and a specific number, the problem whose difference is less than the specific number.

66. Fill in the missing term in a statement of equality for subtraction.

67. Write either = or ≠, when given a subtraction statement.

68. Correct incorrect sentences in objective 67, by replacing any one term by the number that will make the statement true.

69. Translate a word statement of difference into mathematical symbols, then subtract.

GENERAL OBJECTIVE: MULTIPLICATION OF WHOLE NUMBERS

The student will be able to:

70. Write the product of two whole numbers by positioning on the number line.

71. Represent the product of two whole numbers by writing a rectangular array in column-row notation.

72. Represent the same number by writing equivalent arrays.

73. Multiply any two single digit numbers in column notation.

74. Multiply any two single digit numbers in line notation.

75. State from memory the zero property, i.e. $X \times 0 + 0$.

76. Factor any number from 0 to 144 into two factors.

77. Circle prime numbers from any mathematical grouping.

78. Factor into primes any non-prime number from 0 to 144.

79. Write the square of any given number.

80. Write a number in exponential form when given its perfect square from 0 to 144.

81. Multiply a two digit number by a one digit number in column notation where carrying is not required.

82. Multiply a two digit number by a one digit number in line notation where carrying is not required.

83. Multiply a two digit number by a one digit number in column notation where it is necessary to carry.

84. Multiply a two digit number by a one digit number in line notation where it is necessary to carry.

85. Rewrite in column notation, a multiplication problem that is given in line notation.

86. Multiply a three or more digit number by a one digit number in column notation where it is necessary to carry.

87. Multiply a two digit number by a two digit number where it is not necessary to carry.

88. Multiply a two digit number by a two digit number where it is necessary to carry.

89. Multiply a three or more digit number by a two digit number in column notation where it is necessary to carry.

90. Multiply a five digit number by a five digit number in column notation where it is necessary to carry.

91. Write the addends as a multiplicand, determine the multiplier and solve for the product, when given several duplicate addends.

92. Round off the product to the desired place-value.

93. Demonstrate the commutative axiom by writing in a missing factor in a statement of equality for multiplication.

94. Demonstrate the associative axiom by writing in a missing factor in a statement of equality for multiplication.

95. Circle, when given several multiplication problems, the problem having the least product.

97. Circle, when given several multiplication problems and a specific number, the problem whose product is greater than the given number.

98. Circle, when given several multiplication problems and a specific number, the problem whose product is less than the given number.

99. Fill in the missing factor in a statement of equality, the number that will make the statement true.

100. Write either = or ≠ in a statement involving multiplication.

101. Correct any ≠ in objective 100 by replacing a factor with the value that will make the statement true.

102. Translate a word statement of multiplication into mathematical symbols then multiply.

GENERAL OBJECTIVE: DIVISION OF WHOLE NUMBERS

The student will be able to:

103. Divide two numbers where the quotient and divisor are one digit numbers, where there is no remainder.

104. Check a division problem by multiplying the quotient and divisor, the result being the dividend.

105. Divide two numbers, where the quotient and divisor are one digit numbers, with a remainder.

106. Check a division problem with a remainder, by multiplying the quotient and divisor, then adding the remainder to the product, the result being the dividend.

107. Write a remainder using fractional notation.

108. Write a fraction as a division problem.

109. Rewrite a division problem in line notation in standard form.

110. Divide a two digit dividend by a two digit divisor.

111. Divide a three digit number dividend by a two digit number divisor.

112. Divide a three or more digit number by a three digit divisor.

113. Round off the quotient to a specific number of places.

114. Circle the division problem having the greatest quotient from several given division problems.

115. Circle, from several division problems, the problem having the least quotient.

116. Circle, when given several division problems and a specific number, the problem whose quotient is greater than the specific number.

117. Circle, when given several division problems and a specific number, the problem whose quotient is less than the specific number.

118. Fill in a missing term in a division statement of equality.

119. Write either = or ≠ in a statement of division to produce a correct statement.

120. Correct a division statement of ≠, by replacing one of the quotient, divisor, dividend, or remainder, in order to produce a true statement.

121. Translate a verbal statement of division into mathematical statements, and complete division.

122. Translate a two-step word statement involving any of the four operations, into mathematical symbols, select the proper operation(s) and correctly perform the mechanics to obtain a solution.

OPTIONAL OBJECTIVES FOR MULTIPLICATION FOR USE WITH WORK BOOKS AS THE DR. FOLEY SERIES

The student will be able to:

1. Multiply by use of the calculator method, i.e. repeating one factor as the addend, the number of times indicated by the second factor.

2. Use the calculator method where subtraction is used as a short cut, when one of the two numbers is close to x times 10.

   example: 123 x 49 =

   ten 123's
   ten 123's
   ten 123's = fifty 123's
   ten 123's
   ten 123's
   6150
   - 123 = one 123
   6027 = 49 one twenty threes

3. Multiply two numbers by use of the halving and doubling method.

   example: 23 x 27 =

23	27	
11	54	
5	108	
~~2~~	~~216~~	(delete when both are even)
1	432	
	621	

4. Multiply numbers, where both of the numbers are close multiples of 10, by subtracting each of the numbers from 100, multiplying their differences (this is the last 2 digits of the answer), then subtract the difference from the opposite factor to get the first two digits of the answer.

   example: 93 x 94 =

   93 from 100 = 7

   94 from 100 = 6
   42 the last two digits of answer

   93 - 6 = 87 the first two digits

   the product is 8742

OPTIONAL STUDIES FOR NUMERATION SYSTEMS ON WHOLE NUMBERS IN CONNECTION WITH WORK BOOKS, i.e., DR. FOLEY SERIES

The student will be able to:

1. Compare, when given the various symbols that represent counting numbers in different cultures, their similarities and differences by class discussion.

2. When given the Egyptian numeral and its equivalent modern numeral, write the Egyptian numeral from the modern numeral.

3. When given the modern numeral and the Egyptian numeral, write the modern numeral from the Egyptian numeral.

4. Contrast the Egyptian system and the modern system by discussion of the lack of place-value in the former, and the lack of a symbol for zero.

5. Determine by class discussion the basic concepts the Egyptian system used to establish their numeration system (directing the discussion to establish the following four concepts).

   a. A basic set of symbols
   b. A single numeral representing a collection of objects
   c. A repeated symbol to form other numbers
   d. Adding a group of symbols to find the number represented.

6. Compare addition and subtraction of the modern system and the Egyptian system by discussing similarities and differences by setting up problems in both systems and determining by further discussion which system is the easiest to use.

7. When given the Babylonian representation for numbers, write the equivalent Babylonian numeral when given a Hindu Arabic (modern system) numeral.

8. Fill in the missing Hindu Arabic or Babylonian numerals when given a table of both Hindu Arabic and/or Babylonian numerals, by writing.

9. When given the Roman numerals and their Hindu Arabic equivalent, discuss in class their use today and why this system has remained while the other systems have not.

10. Write the equivalent Roman numeral, when given a Hindu Arabic numeral.

11. Write the equivalent Hindu Arabic numeral, when given a Roman numeral.

12. Demonstrate the subtractive idea in Roman numerals by writing the correct Roman numeral when given a Hindu Arabic numeral and the following restrictions·

    a. I before only a V or X
    b. X before only a L or C
    c. C before only a D or M

    example: 34=XXXIV = 10+10+10+(5-1)

13. Write large Hindu Arabic numerals using the multiplicative idea of the bar, in terms of the Roman numeral.

14. Given addition and subtraction problems in both Hindu Arabic and Roman numerals, convert the given numerals to the other system and solve.

15. Compare by discussion the Babylonian, Egyptian, Egyptian Roman and Hindu Arabic, noting similiarities, differences and their degree of difficulty in addition and subtraction.

16. Given the name transfer, from Hindu Arabic to the Decimal System, the student will discuss its superiority over other numeration systems in terms of (a) difficulty of operations (b) expressions of very large and very small numbers (c) a place-value system using ten basic symbols.

17. Select from a group of numbers, numbers to the base ten.

18. Rewrite the number in terms of powers of ten when given the number.

    example: 124 = 100 + 10 + 10 + 4

19. Write a multiple of 10 as an exponent.

20. Construct a number line and locate the multiples of ten.

21. Write a given number in exponential form, by factoring, then grouping, then writing the exponent.

22. Develop by writing in sequence, counting number with the bases 3, 4, 5.

23. Write, when given a number with the base ten, its equivalent with the base 3, 4, 5 using the list from objective 22.

24. Write, when given a number base 10, that is an integral multiple of 10, the equivalent number value with the base 3, 4, 5.

25. Write the equivalent number base 10, when given a number base 3, 4, 5.

26. Construct an addition table with the base 3, 4, 5.

27. Add numbers with the base 3, 4, 5, using two addends and the table in objective 26.

28. Construct a subtraction table for numbers with the base 3, 4, 5.

29. Subtract two numbers base 3, 4, 5 using the table.

30. Construct a multiplication table for numbers base 3, 4, 5.

31. Write the product of two numbers with the base 3, 4, 5 with two digits using the tables.

32. Construct an additional table for numbers to the base 2.

33. Write the number of numbers to the base 2 by use of the table in objective 32.

34. Rewrite a number base 10 as a number base 2.

35. Construct a multiplication table with the base 2.

36. Multiply two numbers with the base 2 using the table.

37. Divide two numbers with the base 3, 4, 5 where the dividend has a greater number of digits than the divisor.

38. Divide numbers with the base 3, 4, 5 where the dividend has a greater number of digits than the divisor.

39. Position numbers on the number line, when given several numbers of different bases.

40. List numbers in order of magnitude, when given several numbers of different bases.

GENERAL OBJECTIVE: FRACTIONAL NUMERATION

The student will be able to:

1. Identify the numerator of a fraction by position.

2. Identify the denominator of a fraction by position.

3. Circle common fractions from a set of numbers.

4. Circle "improper" fractions from a set of numbers.

5. Circle mixed numbers from a set of numbers.

6. Circle fractions equivalent to a given fraction from a set of fractions.

7. Shade an object or identify an object, which is correctly shaded in a fractional part, where the fraction has a numerator of 1, (1/3, 1/2, 1/4, etc.).

8. Shade an object or identify an object which is correctly shaded in a fractional part, where the fraction has a numerator other than 1.

9. Circle from a set of fractions, those that are equivalent to the number 1.

10. Write a literal interpretation of a numerical fraction.

11. Write a numerical fraction from a literal interpretation of a fraction.

12. Write a fraction from an example, giving a "part-whole" situation, by placing the part over the whole.

13. Identify the numerator of a fraction as a part of the whole.

14. Identify a fraction with zero denominator as an undefined term.

15. Identify a fraction with zero numerator as zero.

16. Write an equivalent fraction from a fraction by multiplying the numerator and denominator by the same number.

17. Reduce a fraction by factoring the same number from the numerator and denominator.

18. Place the position of any common fraction on the number line.

19. Write any two fractions as equivalent fractions having a common denominator, by multiplying both parts of each fraction by the denominator of the other.

20. Order any two common fractions by writing them as equivalent fractions having a common denominator, taking the fraction with the larger numerator as the larger and placing the appropriate symbol = > , < between them.

21. Add any two common fractions with the same denominator, by placing the sum of the two numerators over the common denominator, in column notation.

22. Add any two common fractions with the same denominator, by placing the sum of the two numerators over the common denominator, in line notation.

23. Rewrite any sum of common fractions, given in line notation, in column notation.

24. Add any two common fractions with different denominators by writing them as equivalent fractions having a common denominator (the product of the two denominators), then adding the two equivalent fractions in column notation.

25. Add any two common fractions with different denominators, by writing them as equivalent fractions having a common denominator (the product of the two denominators), then adding the two equivalent fractions in line notation.

26. Determine the least common multiple of any two or more numbers between 1 and 100, by listing the least number of factors that will produce each of the two numbers, and then multiplying the factors together.

27. Add any two common fractions with different denominators between 1 and 100, by converting the fractions to equivalent fractions, having a least common denominator (the least common multiple of the two denominators) in column notation.

28. Add any two common fractions with different denominators, between 1 and 100, by converting the fractions to equivalent fractions, having a least common denominator (the least common multiple of the two denominators) in line notation.

29. Add any number of common fractions, writing each as an equivalent fraction with a least common denominator, in column notation.

30. Add any number of common fractions, writing each as an equivalent fraction with a least common denominator, in line notation.

31. Write any mixed number as an "improper" fraction.

32. Write any "improper" fraction as a mixed number.

33. Write a whole number as a mixed number.

34. Write any whole number as a fraction.

35. Place the position of any mixed number on the number line.

36. Order any two mixed numbers, by writing them as fractions having the same denominator.

37. Add any two mixed numbers by converting them to "improper" fractions with a common denominator, in column notation.

38. Add any two mixed numbers by converting them to "improper' fractions with a common denominator, in line notation.

39. Write the sum of any two mixed numbers by adding the whole number parts and adding to it the sum of the common fractional parts, in column notation.

40. Write the sum of any two mixed numbers by adding the whole number parts and adding to it the sum of the common fractional parts, in line notation.

41. Rewrite any sum of mixed numbers, given in line notation, in column notation.

42. Add a mixed number and a whole number, in column notation.

43. Add a mixed number and a whole number, in line notation.

44. Add a mixed number and a common fraction, in column notation.

45. Add a mixed number and a common fraction, in line notation.

46. Add a whole number and a common fraction, in column notation.

47. Add a whole number and a common fraction, in line notation.

48. Add any combination of three or more fractions, mixed numbers and whole numbers, in column form only.

49. Add three or more mixed numbers, in column notation.

50. Write the sum of any number of fractions as a mixed number.

51. Translate a word statement of addition of fractions, into mathematical symbols, then write the sum.

GENERAL OBJECTIVE: SUBTRACTION OF FRACTIONS

The student will be able:

52. Subtract any two common fractions with the same denominator, by placing the difference of the two numerators over the common denominator, in column notation.

53. Subtract any two common fractions with the same denominator, by placing the difference of the two numerators over the common denominator, in line notation.

54. Rewrite the difference of two fractions, given in line notation, in column notation.

55. Subtract any two common fractions with different denominators by converting both fractions to equivalent fractions with a common denominator (the product of the two denominators), in column notation.

56. Subtract any two common fractions with different denominators by converting both fractions to equivalent fractions with a common denominator (the product of the two denominators), in line notation.

57. Subtract any two common fractions with different denominators between 1 and 100 by converting the fractions to equivalent fractions, having a least common denominator (the least common multiple of the two denominators), in column notation.

58. Subtract any two common fractions with different denominators between 1 and 100 by converting the fractions to equivalent fractions, having a least common denominator (the least common multiple of the two denominators), in line notation.

59. Subtract any two mixed fractions, if the whole part and fractional part of the minuend are greater than the whole part and fractional part of the subtrahend, by taking the respective differences of the whole and fractional parts, in column notation.

60. Su tract any two mixed fractions, if the whole part and fractional part of the minuend are greater than the whole part and fractional part of the subtrahend, by taking the respective differences of the whole and fractional parts, in line notation.

61. Convert a mixed number to an equivalent "improper" mixed number by taking part of the whole number, writing it as a fraction and adding it to the fractional part.

62. Subtract any two mixed fractions by converting the minuend to an "improper" mixed fraction, in which both the whole and fractional parts are greater respectively, than those of the subtrahend, in column notation.

63. Subtract a common fraction from a whole number by subtracting the common fraction from the whole number written as a fraction, in column notation.

64. Subtract a common fraction from a whole number by subtracting the common fraction from the whole number written as a fraction, in line notation.

65. Subtract a mixed number from a whole number by converting both of the numbers to fractions in column notation.

66. Subtract a mixed number from a whole number by converting the mixed number to an "improper" fraction, in column notation.

67. Subtract a common fraction from a mixed number, if the common fraction is less than the fractional part of the mixed number, by subtracting the fraction from the fractional part of the mixed number, in column notation.

68. Subtract a common fraction from a mixed number, if the common fraction is greater than the fractional part of the mixed number, by writing the mixed number as an "improper" mixed number, in which the fractional part is greater than the common fraction, in column notation.

69. Subtract a whole number from a mixed number by subtracting the whole number part of the mixed number, in column notation.

70. Convert an "improper" mixed number to its simplest mixed number form, by simplifying the fraction of the mixed number and adding the whole number parts.

71. Subtract any two mixed numbers by converting both to fractions, in column notation.

72. Subtract any two mixed numbers by converting both to fractions, in line notation.

73. Write the difference of any combination of fractions, and whole numbers as a mixed number.

74. Translate a word statement of difference between fractions into mathematical symbols, then write the difference.

GENERAL OBJECTIVE: MULTIPLICATION OF FRACTIONS

The student will be able to:

75. Write the product of any two common fractions by writing it as the product of the numerators divided by the product of the denominators, in column notation.

76. Write the product of any two common fractions by writing it as the product of the numerators divided by the product of the denominators, in line notation.

77. Rewrite any product of fractions, given in column notation, in line notation.

78. Factor the greatest possible number(s) from any numerator and any denominator of a multiplication of fractions, in order to simplify multiplication.

79. Multiply any two mixed numbers by writing them as fractions in line notation.

80. Multiply a whole number and a common fraction by writing the whole number as a fraction and multiplying the two fractions, in column notation.

81. Multiply a whole number and a common fraction by writing the whole number as a fraction and multiplying the two fractions, in line notation.

82. Multiply a whole number and a mixed number by writing both as fractions, in column notation.

83. Multiply a whole number and a mixed number by writing both as fractions, in line notation.

84. Multiply a whole number and a mixed number by multiplying both parts of the mixed number by the whole number and adding both products together, in column notation.

85. Multiply a whole number and a mixed number by multiplying both parts of the mixed number by the whole number and adding both products together in line notation.

86. Multiply a mixed number and a common fraction by writing the mixed number as a fraction, in column notation.

87. Multiply a mixed number and a common fraction by writing the mixed number as a fraction, in line notation.

88. Multiply three common fractions, in line notation.

89. Multiply three mixed numbers, in line notation.

90. Multiply any combination of three mixed numbers, common fractions and whole numbers, by writing them as fractions in line notation.

91. Rewrite the product of any combination of fractions, whole numbers and mixed numbers as a mixed number.

92. Translate a word statement of multiplication of fractions into mathematical symbols, then write the product.

GENERAL OBJECTIVE: DIVISION OF FRACTIONS

The student will be able to:

93. Write the reciprocal of any fraction by inverting the positions of the numerator and denominator of the fraction.

94. Write the reciprocal of any whole number by writing the whole number as a fraction and inverting the fraction.

95. Write the reciprocal of any mixed number by writing the mixed number as a fraction and inverting the fraction.

96. Divide any two common fractions by multiplying the dividend by the reciprocal of the divisor.

97. Divide any two mixed numbers by converting both to fractions, then writing the quotient.

98. Divide a common fraction by a whole number by multiplying the common fraction by the reciprocal of the whole number.

99. Divide a mixed number by a whole number by converting the mixed number to a fraction and then multiplying by the reciprocal of the whole number.

100. Divide a whole number by a common fraction by writing the whole number as a fraction and multiplying by the reciprocal of the common fraction.

101. Divide a whole number by a mixed fraction by writing the whole number as a fraction, converting the mixed number to a fraction and multiplying the whole number fraction by the reciprocal of the improper fraction.

102. Divide a mixed number by a common fraction by writing the mixed number as a fraction, and multiplying by the reciprocal of the common fraction.

103. Divide a common fraction by a mixed number by converting the mixed number to a fraction and multiplying the common fraction by the reciprocal of the improper fraction.

104. Write the quotient of two fractions as a mixed number.

105. Divide the quotient of two fractions by another fraction.

106. Find a number when a fractional part of it is known, by dividing the given number, representing the fractional part of the unknown number, by the given fraction.

107. Find what part one number is of another, by dividing the first by the second.

108. Translate a word statement of division involving fractions, into mathematical symbols and writing the quotient.

109. Compare two numbers by writing one as a fractional part of the other.

110. Find a fractional part of a number by multiplying the fraction by the number.

111. Convert a fraction to a decimal equivalent by dividing the numerator by the denominator.

112. Convert a mixed number to a decimal equivalent.

113. Compute the solution of a number of fractions involving a combination of operations.

114. Translate a word statement of fractions involving more than one operation, into mathematical symbols, then writing the solution.

GENERAL OBJECTIVE: NUMERATION AND OPERATIONS ON DECIMALS

The student will be able to:

1. Write a literal interpretation of a numerical decimal.
2. Write a numerical decimal from a literal interpretation of the decimal.
3. Convert a decimal fraction to a fraction.
4. Place any two or more decimals on the number line.
5. Convert a mixed decimal to a mixed number.
6. Round off a decimal to tenths, hundredths and thousandths.
7. Round off a decimal to a whole number.
8. Add two or more one digit decimals.
9. Convert the sum of decimals from line notation to column notation.
10. Add two or more decimals having the same number of digits to the right of the decimal point.
11. Add two or more decimals having a different number of digits to the right of the decimal point.
12. Add a decimal and a whole number.
13. Translate a word statement of addition of decimals into mathematical symbols, then write the solution.
14. Subtract decimals having the same number of digits to the right of the decimal point.
15. Subtract decimals where the minuend has more digits to the right of the decimal point than the subtrahend.
16. Subtract decimals where the subtrahend has more digits than the minuend.
17. Subtract a decimal from a whole number.
18. Subtract a whole number from a mixed decimal.
19. Translate a word statement of subtraction of decimals into mathematical symbols, then writing the difference.
20. Multiply decimals having the same number of digits to the right of the decimal point.
21. Convert a problem given in line notation into column notation.

22. Multiply decimals having a different number of digits to the right of the decimal point.

23. Multiply a decimal by a whole number.

24. Multiply a decimal by a power of ten.

25. Translate a word statement of multiplication of decimals into mathematical symbols, then write the product.

26. Divide two decimals having the same number of digits to the right of the decimal point.

27. Divide a mixed decimal by a whole number.

28. Divide a decimal fraction by a whole number.

29. Divide a whole number by a decimal.

30. Divide a whole number by a larger whole number.

31. Divide a decimal by a fraction.

32. Divide a decimal by a power of ten.

33. Translate a word statement of division of decimals into mathematical symbols, then write the quotient.

34. Add quantities of money.

35. Subtract quantities of money.

36. Multiply an amount of money by a whole number.

37. Multiply an amount of money by a fraction.

38. Multiply an amount of money by a mixed number.

29. Divide an amount of money by a whole number.

40. Translate a word statement involving a combination of operations on decimals, into mathematical symbols then writing the solution.

GENERAL OBJECTIVE: PERCENTAGE

The student will be able to:

1. Discuss the difference between per cent and percentage.

2. Write examples of: (a) per cent
   (b) percentage

3. Identify the sign of per cent.

4. Change per cent to decimal:

    (a) Given a one digit number in per cent notation, the student will rewrite the number omitting the per cent sign.

    (b) Given a two digit number in per cent notation, the student will rewrite the number omitting the per cent sign.

    (c) Given a three digit number in per cent notation, the student will rewrite the number omitting the per cent sign.

    (d) Given a mixed number in per cent notation, the student will rewrite the number omitting the per cent sign.

5. Change decimals to per cent:

    (a) Given a one digit decimal the student will rewrite the decimal omitting the decimal point.

    (b) Given a two digit decimal the student will rewrite the decimal omitting the decimal point.

    (c) Given a three digit decimal the student will rewrite the decimal omitting the decimal point.

    (d) Given a four digit decimal the student will rewrite the decimal omitting the decimal point.

    (e) Given a five digit decimal the student will rewrite the decimal omitting the decimal point.

    (f) Given a mixed decimal the student will rewrite the decimal omitting the decimal point.

6. Change per cents to common fractions or mixed numbers:

    (a) Given a one digit number in per cent notation, the student will rewrite the number as a common fraction.

    (b) Given a two digit number in per cent notation, the student will rewrite the number as a common fraction.

    (c) Given a three digit number in per cent notation, the student will rewrite the number as a common fraction or a mixed number.

    (d) Given a mixed number in per cent notation, the student will rewrite the number as a common fraction or a mixed number.

7. Change common fractions or mixed numbers to per cents:

   (a) Given a common fraction with a one digit numerator and a one digit denominator, the student will rewrite the common fraction as a decimal and then change the decimal to per cent.

   (b) Given a common fraction with a one digit numerator and a two digit denominator, the student will rewrite the common fraction as a decimal and then change the decimal to per cent.

   (c) Given a common fraction with a two digit numerator and a two digit denominator, the student will rewrite the common fraction as a decimal and then change the decimal to per cent.

   (d) Given a common fraction with a two digit numerator and a three digit denominator, the student will rewrite the common fraction as a decimal and then change the decimal to per cent.

   (e) Given a fraction with a two digit numerator and a one digit denominator, the student will rewrite the fraction as a decimal and then change the decimal to per cent.

   (f) Given a fraction with a three digit numerator and a one digit denominator, the student will change the fraction to a decimal and then rewrite the decimal as per cent.

   (g) Given a fraction with a three digit numerator and two digit denominator, the student will rewrite the fraction as a decimal and then change the decimal to per cent.

   (h) Given a mixed number consisting of a one digit whole number part and a one digit numerator and denominator fractional part, the student will rewrite the mixed number as a decimal and change the decimal to per cent.

   (i) Given a mixed number consisting of a one digit whole number part and a one digit numerator - two digit denominator fractional part, the student will rewrite the mixed number as a decimal and change the decimal to per cent.

   (j) Given a mixed number consisting of a two digit whole number part and a one digit numerator and denominator fractional part, the student will rewrite the mixed number as a decimal and change the decimal to per cent.

   (k) Given a mixed number consisting of a two digit whole number part and a one digit numerator - two digit denominator fractional part, the student will rewrite the mixed number as a decimal and change the decimal to per cent.

8. Calculate a percentage, given a one or two digit per cent and a three or more digit number in whole or decimal form.

9. Calculate what % one number is of another if the given numbers are:

   (a) whole numbers

   (b) fractions

   (c) decimals

   (d) combinations of whole numbers, fractions and decimals.

10. Calculate the number when a percentage of it is known given a one or two digit per cent in whole, decimal or fractional form, and a three or more digit percentage in whole or decimal form.

11. Solve, by writing in mathematical symbols, word statements involving:

    (a) sales tax
    (b) discount
    (c) commission
    (d) profit and loss
    (e) interest
    (f) school activities
    (g) sports
    (h) budgeting
    (i) buying
    (j) salaries
    (k) chemical mixtures
    (l) census
    (m) polls
    (n) statistics

GENERAL OBJECTIVE: THE FORMULA

The student will be able to:

1. Evaluate an algebraic expression, when values of the variables are known, by substituting the given values for each letter and performing the necessary operations.

2. Find the required value of a formula, by copying the given formula, substituting the given values for the letters, and performing the necessary operations.

3. Solve algebraic equations of the form: $x + a = b$, where a and 6 are positive whole numbers, $b >$ or $= a$.

4. Solve algebraic equations of the form: $x + a = b$, where a and b are positive real numbers, $b > = a$.

5. Solve algebraic equations of the form: $x - a = b$, where a and b are positive whole numbers.

6. Solve algebraic equations of the form: $x - a = b$, where a and b are positive real numbers.

7. Solve algebraic equations of the form: $ax = b$, where a and b are positive whole numbers.

8. Solve algebraic equations of the form: $ax = b$, where a and b are positive real numbers.

9. Solve algebraic equations of the form $x/a = b$, where a and b are positive whole numbers.

10. Solve algebraic equations of the form: $x/a = b$, where a and b are positive real numbers.

11. Solve algebraic equations of the form: $ax + b = c$, where a, b, and c are positive real numbers, $c >$ or $= b$.

12. Find missing values of a formula when all but one of the quantities are known, by copying the formula, substituting given values for the letters, performing the required operations, then solving the resulting equation.

13. Write a formula from a word statement, by writing the arithmetic numbers, symbols, and letters representing the given quantities in the required order to show the relationship between quantities.

GENERAL OBJECTIVE: DENOMINATE NUMBERS AND MEASUREMENT

The student will be able to:

1. Compute distances on maps by use of scale.

2. Compute lines on drawings by the use of a given scale.

3. Calculate the perimeter of a rectangle given its length and width, and the formula $P = 2w + 2l$.

4. Calculate the perimeter of a square given the length of a side.

5. Calculate the perimeter of a triangle given the lengths of the sodes/

6. Calculate the diameter of a circle given its radius and the formula $D = 2r$.

7. Calculate the radius of a circle given its diameter and the formula $D = 2r$.

8. Calculate the circumference of a circle, given its radius and the formula $C = 2\pi r$, where $\pi = 22/7$.

9. Calculate the circumference of a circle, given its diameter and the formula $C = \pi D$, where $\pi = 22/7$.

10. Draw a bar graph when given a set of measurements.

11. Draw a line graph, given a set of measurements.

12. Calculate the area of a rectangle, given the length and width and the formula $A = lw$.

13. Calculate the volume of a rectangular solid, given the length, width, height and formula $V = lwh$.

14. Calculate the volume of a cube, given the length of a side.

15. Calculate the area of a circle, given the radius and the formula $A = \pi r^2$, where $\pi = 22/7$.

16. Calculate the area of a circle, given the diameter and the formula $A = (\pi D^2) \div 4$, where $\pi = 22/7$.

17. Calculate the area of a triangle, given a base, and the altitude to that base, and the formula $A = ba \div 2$.

18. Calculate the width of a rectangle, given the area of the rectangle, the length of the rectangle and the formula $A = lw$.

19. Calculate the length of a rectangle, given the area of the rectangle and the width of the rectangle, and the formula $A = lw$.

20. Calculate the width of a rectangle, given the perimeter of the rectangle and its length and the formula $P = 2l + 2w$.

21. Calculate the length of a rectangle, given the perimeter of the rectangle and its width and the formula $P = 2l + 2w$.

22. Calculate the length of a side of a square, given its perimeter, and the formula $P = 4l$.

23. Calculate the radius of a circle, given its circumference and the formula $C = 2\pi r$, where $\pi = 22/7$

24. Calculate the diameter of a circle, given its circumference and the formula C = D, where = 22/7.

25. Add numbers of one denomination

26. Subtract numbers of one denomination.

27. Multiply numbers of one denomination.

28. Divide numbers of one denomination.

29. Write the sum of compound numbers in simple form.

30. Subtract compound number of two or more denominations if the denominations of the minuend are greater than those of the subtrahend.

31. Subtract any two compound numbers, by writing the minuend as an equivalent number, in which the denominations are greater than those of the subtrahend.

32. Convert a compound number to an "improper" compound number (12 dollars, 108 cents).

33. Write the product of a compound number and a whole number.

34. Write the product of a compound number and a whole number in simple form.

35. Write the product of compound number of two or more denominations.

36. Write the product of compound numbers in simple form.

37. Write the quotient of a compound number and a whole number where all the units are exactly divisible.

38. Divide compound numbers of two or more denominations by counting the numbers to the smallest given denominate.

39. Write the quotient of two compound numbers in simple form.

40. Convert time from AM or PM to the 24 hour clock.

41. Convert time from the 24 hour clock to AM or PM.

THE STUDENT WILL BE ABLE TO CONVERT, WITHOUT A TABLE, THE FOLLOWING UNITS:

42. Feet to inches.

43. Inches to feet.

44. Yards to feet

45. Feet to yards

46. Yards to inches

47. Inches to yards

48. Miles to feet

49. Feet to miles

50. Miles to yards

51. Yards to miles

52. Square feet to square inches

53. Square inches to square feet

54. Square yards to square feet

55. Square feet to square yards

56. Pints to ounces

57. Ounces to pints

58. Quarts to pints

59. Pints to quarts

60. Gallons to quarts

61. Quarts to gallons

62. Pounds to ounces

63. Ounces to pounds

64. Tons to pounds

65. Pounds to tons

66. Years to months

67. Months to years

68. Years to weeks

69. Weeks to years

70. Years to days.

71. Days to years

72. Weeks to days

73. Days to weeks

74. Days to hours

75. Hours to days

76. Hours to minutes

77. Minutes to hours

78. Seconds to minutes

79. Minutes to seconds

80. Years to centuries

81. Centuries to years

THE STUDENT WILL BE ABLE TO CONVERT THE FOLLOWING UNITS BY USE OF A TABLE:

82. Acres to square miles

83. Square miles to acres

84. Cubic feet to cubic inches

85. Cubic inches to cubic feet

86. Cubic yards to cubic feet

87. Cubic feet to cubic yards

88. Millimeters to centimeters

89. Centimeters to millimeters

90. Centimeters to meters

91. Meters to centimeters

92. Meters to kilometers

93. Kilometers to meters

94. Milligrams to grams

95. Grams to milligrams

96. Kilograms to grams

97. Grams to kilograms

98. Square millimeters to square centimeters

99. Square centimeters to square millimeters

100. Square centimeters to square meters

101. Square meters to square centimeters

102. Square meters to square kilometers

103. Square kilometers to square meters

104. Cubic millimeters to cubic centimeters

105. Cubic centimeters to cubic millimeters

106. Cubic centimeters to cubic meters

107. Cubic meters to cubic centimeters

108. Meters to inches

109. Inches to meters

110. Meters to feet

111. Feet to meters

112. Yards to meters

113. Meters to yards

114. Centimeters to inches

115. Inches to centimeters

116. Millimeters to inches

117. Inches to millimeters

118. Kilometers to miles

119. Miles to kilometers

120. Liters to quarts

121. Quarts to liters

122. Grams to ounces

123. Ounces to grams

GENERAL OBJECTIVE: BUSINESS MATHEMATICS

The student will be able to:

1. Write a check, given the amount for which the check is to be written, the payee, and the date.

2. Balance a checking account, given a previous balance, an amount of a check, and an amount of a deposit.

3. Write out a deposit slip, given an amount in cash and an amount in checks.

4. Write sales tax, given any amount of money and the per cent of tax.

5. Determine tax from a tax table, given gross income, marital status, number of dependents, and deductions.

6. Write a difference between tax due and amount withheld from pay after objective 5.

7. Change millage to per cent.

8. Compute local tax, given property assessment and millage.

9. Fill out a bill of sale, given the item(s), number of each item, the nomenclature for each item, the cost of each item, and the name of the purchaser.

10. Compute overtime pay, given an overtime rate, and the amount of overtime hours.

11. Compute daily, weekly, monthly, and yearly pay from an hourly rate.

12. Compute daily, weekly, monthly, and yearly pay from an hourly rate, with overtime.

13. Discuss in class the differences between straight life insurance, endowment insurance, term insurance, and limited payment insurance.

14. Compute an electricity bill, given the amount of electricity used and the rate.

15. Compute amount of electricity used, given two meter readings.

16. Compute a water bill, given the amount of water used, and the rate.

17. Discuss in class the differences between collision insurance, liability insurance, fire insurance, theft insurance, and comprehensive insurance.

18. Compute the miles per gallon of gasoline, given two mileage readings and the number of gallons used.

19. Discuss in class the factors contributing to the cost of operating an automobile.

20. Discuss a carrying charge.

21. Adjust recipes, given the measure of each ingredient and the number of individuals to be served.

22. Discuss in class the monthly payment, where the interest is computed on a yearly basis and on a per cent of the unpaid balance.

23. Compute simple interest on a savings account, given the principle, and the interest rate.

24. Compute compound interest on a savings account, given the principle and the interest rate.

25. Compute an amount of commission based on sales, given the amount of sales and the commission rate.

26. Discuss in class the parameters involved in computing overhead in a business.

27. Discuss in class the parameters involved in computing operating expenses in a business.

28. Discuss in class the parameters involved in computing loss in a business.

29. Discuss in class the parameters involved in computing profit in a business.

30. Compute discount, given the amount of purchase and the discount rate.

31. Compute the average of a number of items.

32. Compute the rate of increase, given the initial total and the final total.

33. Compute the rate of decrease, given the initial total and the final total.

34. Discuss in class the parameters involved in computing mortgage payments.

35. Write a receipt of sale, given the item(s) purchased, the number of items, the nomenclature, the cost of each item, the purchaser, date, sales tax, and final cost.

OPTIONAL OBJECTIVES

The student will be able to:

36. Keep a list of income and expenditures for daily, weekly, and monthly periods.

37. Discuss the parameters involved in listing fixed expenditures.

38. Discuss the parameters involved in listing varying expenditures.

39. Fill out an income tax form.

40. Discuss in class the use of the various tables necessary to fill out an income tax form.

APPENDIX C

LOCAL NORMS TABLES*

---

* Tests displayed in Volume II.

BIOLOGY PROGRESS TEST SCORES 1967-1968

Following, for your information and use, are the scores obtained by students in your classes. These reports have been delayed in order that the characteristics of the tests and the appropriateness of their difficulty with respect to the groups tested might be determined. Only after certain criteria have been satisfied can the individual test scores be considered meaningful. Scores will be reported more quickly during the 1968-1969 school year.

Two aspects of the following reports have implications for score interpretation, and therefore require comment. First, all test scores, obtained from these or any other tests, contain an error component. If a student were to take many forms of the same test and we were able to control such extraneous factors as fatigue and practice, the scores which the student made on these various forms would distribute themselves in the familiar bell-shaped curve. Some of his scores would be relatively low, others would be high, and most of them would cluster around a central point. The average of this distribution of scores could be called the student's true score.

In practice, it is generally possible for us to give only one form of a test to a student. The score he obtains on this one form is not necessarily his true score. It represents only one of the many scores which he would have made if he had taken a large number of alternate forms of the test.

Second, students inevitably make errors in gridding identification information on their answer sheets. These errors are, of course, more numerous during the first year of a new testing program. The data

Processing system has been designed such that misgridded answer sheets will nevertheless be scored properly. However, a gridding error may result in that score being reported in the wrong group. Thus the score from an answer sheet incorrectly gridded "Biology Phase 4, Test 21" will be reported with that group, even though the student was really in Phase 3. If in the course of examining these scores you note such irregularities, a word to the offending gridders would undoubtedly improve the future operation of the system.

The scores reported are raw scores: i.e., the number of test questions answered correctly. In order to interpret a raw score in terms of relative standing within the phase, it must be converted to a percentile rank through use of the norms tables provided. For example, a raw score of 19 on Biology Test #24, Phase 2, has a percentile rank of 83. This means that 83% of the students in Phase 2 scored lower than 19. Again, we remind you that test scores are not perfectly precise. A good rule of thumb is to consider each student's score as being somewhere in the range ±2 around the reported score. Thus a more conservative interpretation of a raw score of 19 would be that this student's true score is probably somewhere in the range 17-21.

Master score report lists, arranged alphabetically within phase, are available through Mr. Skaggs' office. They may be used to locate scores of students who, because of gridding errors, do not appear on your class score reports.

Melbourne High School 1967-1968

Local Norms

Biology Progress Tests 22, 25, and 27 (Phase 2)

Raw Score	Percentile Rank		
	Phase 2		
	Test 22	Test 25	Test 27
30			
29			
28			
27		98	
26	99	96	
25	96	96	99
24	93	93	99
23	90	87	98
22	88	83	96
21	85	77	96
20	81	67	95
19	72	66	93
18	64	60	89
17	57	51	85
16	53	39	78
15	46	32	70
14	41	23	60
13	36	20	50
12	31	18	44
11	24	17	30
10	21	12	19
9	17	10	11
8	15	6	9
7	13	2	7
6	10	1	4
5	7		
4	5		
3	3		

Melbourne High School 1967-1968

Local Norms

Biology Progress Tests 23, 26, and 28 (Phases 3 and 4)

Raw Score	Percentile Rank Test 23 Phase 3	 Test 23 Phase 4	 Test 26 Phase 3	 Test 26 Phase 4	 Test 28 Phase 3	 Test 28 Phase 4
30						99
29				98		99
28	99	99		97		99
27	99	98	99	97		98
26	98	91	99	96		97
25	97	82	99	91		96
24	95	73	99	89	99	95
23	93	61	98	84	99	91
22	89	51	95	75	99	86
21	84	40	93	69	99	79
20	80	33	91	62	97	74
19	75	23	86	56	95	63
18	67	19	80	42	93	59
17	58	15	75	31	90	50
16	50	14	67	26	87	40
15	39	12	57	20	85	38
14	31	8	46	13	77	32
13	26	4	38	6	71	21
12	16	3	28	4	64	14
11	13	2	21	1	54	9
10	10	1	15	1	41	6
9	5	1	7		33	5
8	3		4		22	3
7	1		2		15	1
6	1		1		6	
5					3	
4					1	
3					1	

Melbourne High School 1967-1968

Local Norms

Biology Progress Tests 21 and 24 (Phases 2-4)

Raw Score	Percentile Rank					
	Test 21			Test 24		
	Phase 2	Phase 3	Phase 4	Phase 2	Phase 3	Phase 4
30			98			
29		99	96			
28		99	90			95
27		97	82		99	93
26		95	76		98	84
25		91	61	99	96	73
24	98	83	46	97	93	65
23	96	78	39	97	88	51
22	96	68	33	94	82	39
21	93	59	24	90	75	33
20	84	48	19	84	63	21
19	82	38	12	83	51	16
18	73	31	10	74	42	13
17	67	25	7	68	32	10
16	57	17	5	61	25	6
15	46	10	4	54	19	5
14	38	7	2	41	14	2
13	26	5		35	10	1
12	16	4		30	7	
11	11	2		23	5	
10	10	1		18	4	
9	8	1		15	3	
8	3			11	1	
7	1			8	1	
6				5		
5				2		

Melbourne High School 1967-1968

Local Norms

Biology Progress Test 20 (Phase 2)

Raw Score	Percentile Rank
36	98
35	93
34	93
33	91
32	90
31	88
30	85
29	80
28	80
27	77
26	73
25	63
24	58
23	54
22	49
21	43
20	37
19	27
18	22
17	20
16	19
15	11
14	10
13	5
12	4
11	1

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on Biology Test 20 as being somewhere in the range ±3 around the reported score.

Melbourne High School 1967-1968

Local Norms

Biology Progress Test 29 (Phases 3 and 4)

Raw Score	Percentile Rank	
	Phase 3	Phase 4
28		99
27		97
26	99	97
25	98	90
24	97	85
23	96	74
22	93	64
21	88	54
20	86	40
19	77	26
18	72	21
17	65	15
16	56	12
15	47	5
14	38	3
13	29	1
12	22	
11	16	
10	9	
9	6	
8	4	
7	2	
6	1	
5	1	
4	1	

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on Biology Test 29 as being somewhere in the range ± 2 around the reported score.

MATHEMATICS PROGRESS TEST SCORES 1967-1968

Following, for your information and use, are the scores obtained by students in your classes. These reports have been delayed in order that the characteristics of the tests and the appropriateness of their difficulty with respect to the groups tested might be determined. Only after certain criteria have been satisfied can the individual test scores be considered meaningful. Scores will be reported more quickly during the 1968-1969 school year.

Two aspects of the following reports have implications for score interpretation, and therefore require comment. First, all test scores, obtained from these or any other tests, contain an error component. If a student were to take many forms of the same test and we were able to control such extraneous factors as fatigue and practice, the scores which the student made on these various forms would distribute themselves in the familiar bell-shaped curve. Some of his scores would be relatively low, others would be high, and most of them would cluster around a central point. The average of this distribution of scores could be called the student's true score.

In practice, it is generally possible for us to give only one form of a test to a student. The score he obtains on this one form is not necessarily his true score. It represents only one of the many scores which he would have made if he had taken a large number of alternate forms of the test.

Second, students inevitably make errors in gridding identification information on their answer sheets. These errors are, of course, more numerous during the first year of a new testing program. The data processing system has been designed such that misgridded answer sheets will nevertheless be scored properly. However, a gridding error may result in that score being reported in the wrong group. Thus the score from an answer sheet incorrectly gridded "Mathematics Phase 3, Test 30" will be reported with that group, even though the student was really in Phase 2. If in the course of examining these scores you note such irregularities, a word to the offending gridders would undoubtedly improve the future operation of the system.

The scores reported are raw scores: i.e., the number of test questions answered correctly. In order to interpret a raw score in terms of relative standing within the phase, it must be converted to a percentile rank through use of the norms tables provided. For example, a raw score of 19 on Mathematics Test #30, Phase 2, has a percentile rank of 8. This means that 8% of the students in Phase 2 scored lower than 19. Again, we remind you that test scores are not perfectly precise. A good rule of thumb is to consider each student's score as being somewhere in the range ±3 around the reported score. Thus a more conservative interpretation of a raw score of 19 would be that this student's true score is probably somewhere in the range 16-22.

Master score report lists, arranged alphabetically within phase, are available through Mr. Scaggs' office. They may be used to locate scores of students who, because of gridding errors, do not appear on your class score reports.

Melbourne High School 1967-1968

Local Norms

Mathematics Progress Test 30 (Phase 2)

Raw Score	Percentile Rank
49	99
48	99
47	98
46	96
45	95
44	89
43	86
42	83
41	81
40	73
39	69
38	63
37	61
36	56
35	52
34	47
33	44
32	43
31	40
30	39
29	34
28	32
27	28
26	23
25	19
24	16
23	14
22	11
21	10
20	8
19	8
18	7
17	4
16	4
15	3
14	1
13	1

Melbourne High School 1967-1968

Local Norms

Mathematics Progress Test 31 (Phase 2)

Raw Score	Percentile Rank
43	99
42	99
41	97
40	96
39	95
38	92
37	91
36	89
35	87
34	85
33	85
32	83
31	79
30	77
29	76
28	74
27	69
26	66
25	63
24	59
23	56
22	50
21	44
20	43
19	40
18	36
17	30
16	22
15	16
14	11
13	7
12	5
11	3
10	1

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on Mathematics Test 31 as being somewhere in the range ±3 around the reported score.

Melbourne High School 1967-1968

Local Norms

Mathematics Progress Test 32 (Phase 2)

Raw Score	Percentile Rank
40	99
39	98
38	97
37	97
36	95
35	94
34	93
33	93
32	92
31	90
30	90
29	90
28	88
27	85
26	82
25	77
24	75
23	70
22	65
21	60
20	57
19	48
18	46
17	39
16	27
15	20
14	16
13	14
12	8
11	6
10	4
9	3
8	1

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on Mathematics Test 32 as being somewhere in the range ±3 around the reported score.

Melbourne High School 1967-1968

Local Norms

Mathematics Progress Test 33 (Phase 2)

Raw Score	Percentile Rank
30	99
29	99
28	99
27	99
26	99
25	99
24	99
23	98
22	94
21	93
20	91
19	84
18	81
17	74
16	67
15	59
14	50
13	41
12	29
11	21
10	16
9	10
8	7
7	3
6	2
5	2
4	1
3	1

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on Mathematics Test 33 as being somewhere in the range ±3 around the reported score.

ENGLISH PROGRESS TEST SCORES 1967-1968

Following, for your information and use, are the scores obtained by students in your classes. These reports have been delayed in order that the characteristics of the tests and the appropriateness of their difficulty with respect to the groups tested might be determined. Only after certain criteria have been satisfied can the individual test scores be considered meaningful. Scores will be reported more quickly during the 1968-1969 school year.

Two aspects of the following reports have implications for score interpretation, and therefore require comment. First, all test scores, obtained from these or any other tests, contain an error component. If a student were to take many forms of the same test and we were able to control such extraneous factors as fatigue and practice, the scores which the student made on these various forms would distribute themselves in the familiar bell-shaped curve. Some of his scores would be relatively low, others would be high, and most of them would cluster around a central point. The average of this distribution of scores could be called the student's true score.

In practice, it is generally possible for us to give only one form of a test to a student. The score he obtains on this one form is not necessarily his true score. It represents only one of the many scores which he would have made if he had taken a large number of alternate forms of the test.

Second, students inevitably make errors in gridding identification information on their answer sheets. These errors are, of course, more numerous during the first year of a new testing program. The data processing system has been designed such that misgridding answer sheets will nevertheless be scored properly. However, a gridding error may result in that score being reported in the wrong group. Thus the score from an answer sheet incorrectly gridded "English Phase 4, Test 35" will be reported with that group, even though the student was really in Phase 3. If in the course of examining these scores you note such irregularities, a word to the offending gridders would undoubtedly improve the future operation of the system.

The scores reported are raw scores; i.e., the number of test questions answered correctly. In order to interpret a raw score in terms of relative standing within the phase, it must be converted to a percentile rank through use of the norms tables provided. For example, a raw score of 19 on English Test #35, Part II, Phase 3, has a percentile rank of 37. This means that 37% of the students in Phase 3 scored lower than 19. Again, we remind you that test scores are not perfectly precise. A good rule of thumb is to consider each student's score as being somewhere in the range ±2 around the reported score for Part I, and ±3 around the reported score for Part II and Total. Thus a more conservative interpretation of a raw score of 19 would be that this student's true score is probably somewhere in the range 16-22, in the case of a Part II or Total score.

Master score report lists, arranged alphabetically within phase, are available through Mr. Scaggs' office. They may be used to locate scores of students who, because of gridding errors, do not appear on your class score reports.

Melbourne High School 1967-1968
Local Norms

English Progress Tests 34 (Phase 2), 35 (Phase 3), and 36 (Phase 4)

Raw Score	Percentile Rank				
	Test 34		Test 35		Test 36
	Part I*	Part II**	Part I*	Part II***	Total
46					99
45					99
44					98
43					98
42					97
41					97
40					96
39				99	94
38				99	93
37				99	91
36				99	87
35				99	83
34				99	78
33				99	72
32				99	68
31		99		99	63
30		98		98	56
29		97		96	50
28		96		93	44
27		94		90	37
26		91		85	31
25		85		80	27
24		79		73	21
23		74		68	15
22		69		59	12
21		60		53	9
20		51		45	7
19		42		37	5
18		36	99	30	3
17		29	99	24	2
16	99	23	98	18	2
15	98	17	96	14	1
14	98	13	93	9	1
13	95	10	89	6	1
12	92	7	82	4	1
11	86	5	71	2	
10	76	5	59	1	
9	65	3	48	1	
8	51	1	35	1	
7	36	1	23		
6	25		13		
5	14		6		
4	5		3		
3	1		1		
2	1				
1	1				

*Spelling (items 1-20)
**Sum of sections II, III, and IV (items 21-60)
***Sum of sections II, III, and IV (items 21-65)

Melbourne High School 1967-1968
Local Norms

English Progress Tests 37 (Phase 2), 38 (Phase 3) and 39 (Phase 4)

Raw Score	Percentile Rank				
	Test 37		Test 38		Test 39
	Part I*	Part II**	Part I*	Part II**	Total
49					99
48					99
47					96
46					93
45					89
44				99	87
43				99	84
42				99	77
41				99	70
40		99		99	65
39		99		98	60
38		98		97	52
37		97		95	44
36		97		92	39
35		95		89	32
34		95		85	28
33		94		81	23
32		89		77	19
31		86		73	15
30		83		66	13
29		77		60	9
28		72		53	7
27		68		48	6
26		65		43	5
25		62		38	4
24		59		32	3
23		53		26	3
22		49		21	2
21		44		18	2
20	99	39	99	15	2
19	99	38	99	13	1
18	99	34	99	11	1
17	98	32	98	8	1
16	95	27	96	6	1
15	91	23	91	5	1
14	83	20	83	4	1
13	76	14	74	3	1
12	67	10	67	2	
11	56	7	55	2	
10	45	4	43	1	
9	35	3	33	1	
8	22	1	25	1	
7	14	1	17		
6	7		10		
5	5		5		
4	3		2		
3	2		1		
2	1		1		
1	1		1		

---

*Spelling (items 1-20)

**Sum of sections II, III, and IV (items 21-65)

See Note on following page.

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on English Tests 37, 38, and 39 as being somewhere in the range ±2 around the reported score for Part I, and ±3 around the reported score for Part II and Total.

Melbourne High School 1967-1968

Local Norms

English Progress Tests 40 (Phase 2), 41 (Phase 3), and 42 (Phase 4)

Raw Score	Percentile Rank				
	Test 40		Test 41		Test 42
	Part I*	Part II**	Part I*	Part II***	Total
47					99
46					97
45					96
44				99	95
43				99	93
42				99	91
41				99	86
40				99	83
39				99	77
38				97	72
37				95	67
36				93	62
35		99		92	54
34		99		89	49
33		99		85	43
32		99		82	36
31		95		76	30
30		94		72	24
29		91		66	19
28		89		61	17
27		83		55	14
26		78		49	12
25		71		44	8
24		67		40	7
23		60		34	6
22		54		29	4
21		49		25	3
20	99	42	99	21	2
19	99	38	97	17	1
18	95	33	91	14	1
17	87	29	81	11	1
16	78	24	69	9	1
15	71	19	59	7	1
14	57	15	45	5	1
13	44	14	33	4	
12	36	11	25	2	
11	26	8	19	1	
10	21	5	13	1	
9	16	3	8	1	
8	11	2	6	1	
7	4	1	4	1	
6	3		3		
5	2		2		
4	1		1		
3	1		1		
2	1		1		
1					

*Spelling (items 1-20)

**Sum of sections II, III, and IV (items 21-60)

***Sum of sections II, III, and IV (items 21-65)

See Note on following page.

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on English Tests 40, 41, and 42 as being somewhere in the range ±2 around the reported score for Part I, and ±3 around the reported score for Part II and Total.

Melbourne High School 1967-1968
Local Norms
English Progress Tests 43 (Phase 2), 44 (Phase 3), and 45 (Phase 4)

Raw Score	Percentile Rank				
	Test 43		Test 44		Test 45
	Part I*	Part II**	Part I*	Part II***	Total
49					99
48					99
47					98
46					96
45					95
44				99	93
43				99	91
42				99	87
41				99	82
40				99	80
39		99		98	76
38		99		97	70
37		98		97	64
36		97		96	57
35		97		95	52
34		96		92	46
33		94		89	42
32		91		85	36
31		90		82	32
30		88		77	28
29		85		72	25
28		81		68	21
27		77		63	17
26		72		56	12
25		67		51	9
24		60		45	9
23		54		40	7
22		49		36	5
21		43		31	4
20		38	99	26	3
19	98	33	94	22	2
18	96	27	87	18	1
17	90	23	79	15	1
16	86	20	67	12	1
15	76	17	54	9	
14	68	14	42	7	
13	59	12	33	6	
12	47	9	25	4	
11	40	6	17	3	
10	32	4	13	2	
9	23	3	9	1	
8	17	1	5	1	
7	10	1	4	1	
6	8	1	2	1	
5	4	1	1		
4	1		1		
3	1		1		
2			1		

*Spelling (items 1 - 20)

**Sum of Sections II, III, and IV (items 21 - 65)

***Sum of Sections II, III, and IV (items 21 - 70)

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on English Tests 43, 44, and 45 as being somewhere in the range ±2 around the reported score for Part I, and ±3 around the reported score for Part II and Total.

AMERICAN HISTORY PROGRESS TEST SCORES 1967-1968

Following, for your information and use, are the scores obtained by students in your classes. These reports have been delayed in order that the appropriateness of the tests with respect to the groups tested might be determined. As you know, the second set of four American History progress tests will not be administered, because of the consensus of opinion among Melbourne History teachers that test content does not match course content. The data do show tests 49 and 50 to be difficult for Phase 3 classes. Test 49 was of appropriate difficulty for Phase 4 classes, and Test 50 was slightly difficult for Phase 4 classes.

Two aspects of the following reports have implications for score interpretation, and therefore require comment. First, all test scores, obtained from these or any other tests, contain an error component. If a student were to take many forms of the same test and we were able to control such extraneous factors as fatigue and practice, the scores which the student made on these various forms would distribute themselves in the familiar bell-shaped curve. Some of his scores would be relatively low, others would be high, and most of them would cluster around a central point. The average of this distribution of scores could be called the student's true score.

In practice, it is generally possible for us to give only one form of a test to a student. The score he obtains on this one form is not necessarily his true score. It represents only one of the many scores which he would have made if he had taken a large number of alternate forms of the test.

Second, students inevitably make errors in gridding identification information on their answer sheets. These errors are, of course, more numerous during the first year of a new testing program. The data processing system has been designed such that misgridded answer sheets will nevertheless be scored properly. However, a gridding error may result in that score being reported in the wrong group. Thus the score from an answer sheet incorrectly gridded "American History Phase 4, Test 50" will be reported with that group, even though the student was really in Phase 3. If in the course of examining these scores you note such irregularities, a word to the offending gridders would undoubtedly improve the future operation of the system.

The scores reported are raw scores; i.e., the number of test questions answered correctly. In order to interpret a raw score in terms of relative standing within the phase, it must be converted to a percentile rank through use of the norms tables provided. For example, a raw score of 19 on American History Test #49, Phase 3, has a percentile rank of 14. This means that 14% of the students in Phase 3 scored lower than 19. Again, we remind you that test scores are not perfectly precise. A good rule of thumb is to consider each student's score as being somewhere in the ±3 around the reported score. Thus a more conservative interpretation of a raw score of 19 would be that this student's true score is probably somewhere in the range 16-22.

Master score report lists, arranged alphabetically within phase, are available through Mr. Scaggs' office. They may be used to locate scores of students who, because of gridding errors, do not appear on your class score reports.

Melbourne High School 1967-1968
Local Norms

American History and Issues in American History Progress Tests 49 and 50, Phases 3 and 4

Raw Score	Percentile Rank Test 49 Phase 3	Percentile Rank Test 49 Phase 4	Percentile Rank Test 50 Phase 3	Percentile Rank Test 50 Phase 4
54		98		
53		96		
52		96		
51		92		
50	99	92	99	
49	99	92	99	
48	99	92	99	
47	99	92	99	
46	99	91	99	98
45	99	85	99	94
44	98	81	98	92
43	98	74	98	92
42	98	70	93	92
41	97	68	98	81
40	96	62	97	81
39	95	57	96	77
38	94	53	96	77
37	91	51	96	75
36	88	38	96	70
35	86	34	94	60
34	83	34	93	57
33	81	26	92	55
32	76	23	91	49
31	71	21	89	43
30	67	19	86	34
29	63	13	83	32
28	59	11	79	28
27	52	8	75	23
26	46	6	69	23
25	41	2	63	21
24	34		57	17
23	30		52	13
22	28		47	13
21	24		41	9
20	18		35	6
19	14		28	6
18	10		23	4
17	7		17	4
16	6		12	4
15	4		8	2
14	3		6	2
13	2		4	
12	1		2	
11	1		1	
10			1	

Melbourne High School 1967-1968

Local Norms

American History and Issues in American History Progress
Tests 51 and 52, Phases 3 and 4

Raw Score	Percentile Rank Test 51 Phase 3	 Test 51 Phase 4	 Test 52 Phase 3	 Test 52 Phase 4
58			99	
57			99	
56			99	
55			99	
54			99	
53	99		99	
52	99		99	
51	99		99	
50	99		99	98
49	99		99	96
48	98		98	96
47	98		98	94
46	98		97	94
45	97		97	88
44	96		97	88
43	97		96	80
42	96	98	94	80
41	95	94	93	78
40	95	92	92	74
39	95	92	90	67
38	94	89	89	67
37	94	85	87	63
36	93	85	84	57
35	92	81	83	53
34	91	79	80	49
33	88	72	75	39
32	87	64	72	35
31	86	55	70	27
30	82	51	68	27
29	78	45	66	25
28	75	36	62	22
27	70	28	57	16
26	66	23	51	12
25	62	21	46	12
24	57	15	41	10
23	52	9	36	8
22	49	9	30	4
21	44	6	28	2
20	40	6	24	2
19	34	4	19	2
18	27		13	2
17	23		11	2
16	16		7	
15	10		4	
14	5		3	

American History and Issues in American History Progress
Tests 51 and 52, Phases 3 and 4, Cont.

Raw Score	Percentile Rank Test 51 Phase 3	 Test 51 Phase 4	 Test 52 Phase 3	 Test 52 Phase 4
13	4		2	
12	2		1	
11	1		1	
10	1		1	
9	1		1	

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on American History Tests 51 and 52 as being somewhere in the range ±3 around the reported score.

BIOLOGY PROGRESS TEST SCORES 1968-1969

Following, for your information and use, are the scores obtained by students in your classes. Two aspects of these reports have implications for score interpretation, and therefore require comment. First, all test scores, obtained from these or any other tests, contain an error component. If a student were to take many forms of the same test and we were able to control such extraneous factors as fatigue and practice, the scores which the student made on these various forms would distribute themselves in the familiar bell-shaped curve. Some of his scores would be relatively low, others would be high, and most of them would cluster around a central point. The average of this distribution of scores could be called the student's true score.

In practice, it is generally possible for us to give only one form of a test to a student. The score he obtains on this one form is not necessarily his true score. It represents only one of the many scores which he would have made if he had taken a large number of alternate forms of the test.

Second, students inevitable make errors in gridding identification information on their answer sheets. The data processing system has been designed such that misgridded answer sheets will nevertheless be scored properly. However, a gridding error may result in that score being reported in the wrong group. Thus the score from an answer sheet incorrectly gridded "Biology Phase 4, Test 71" will be reported with that group, even though the student was really in Phase 3. If in the course of examining these scores you note such irregularities, a word to the offending gridders would undoubtedly improve the future operation of the system.

The scores reported are raw scores; i.e., the number of test questions answered correctly. In order to interpret a raw score in terms of relative standing within the phase, it must be converted to a percentile rank through use of the norms tables provided. For example, a raw score of 19 on Biology Test #71, Phase 2, has a percentile rank of 43. This means that 43% of the students in Phase 2 scored lower than 19. Again, we remind you that test scores are not perfectly precise. A good rule of thumb is to consider each student's score as being somewhere in the range ±3 around the reported score. Thus a more conservative interpretation of a raw score of 19 would be that this student's true score is probably somewhere in the range 16-22.

You may wish to use these test results as a student counseling aid. Percentile ranks (or ranges of percentile ranks) can be used to shed light on two questions:

1. What is the student's standing with respect to others in the same phase?
2. What is the student's standing with respect to others in different phases?

Question 1 is best answered by referring a student's score to the local norms table for a test uniquely appropriate to his phase (tests 72, 75, 77, and 20 for Phase 2; tests 73, 76, 78, and 79 for Phases 3, 4, and 5). Question 2 is best answered by referring a student's score to the local norms table for a test appropriate across phases 2-5 (tests 71 and 74). Of course, scores on tests 71 and 74 can also be used for within-phase comparisons. Likewise, scores on tests 73, 76, 78, and 79 can also be used for across-phase comparisons (except those involving Phase 2). If such additional comparisons produce results in conflict with the procedures initially recommended above, then results of the initially recommended procedures should be given the greatest weight in making decisions about student phase placement.

DAT:ek

Melbourne High School 1968-1969

Local Norms

Biology Progress Tests 71 (Phases 2-4), 72 (Phase 2), and 73 (Phases 3 and 4)

Raw Score	Percentile Rank Test 71 Phase 2	 Test 71 Phase 3	 Test 71 Phase 4	 Test 72 Phase 2	 Test 73 Phase 3	 Test 73 Phase 4
40		99		99		
39		99	99	98		99
38		99	96	98		98
37		99	94	97		93
36		99	88	97		93
35		97	84	96	99	90
34		94	76	94	99	86
33	98	91	69	94	98	81
32	97	87	61	94	97	75
31	97	81	48	93	95	68
30	97	77	39	93	94	63
29	96	71	32	88	92	56
28	95	65	22	84	87	47
27	92	56	15	81	84	40
26	87	51	13	75	77	31
25	83	45	10	69	73	25
24	79	38	8	64	65	18
23	73	32	5	57	60	14
22	69	27	3	51	53	8
21	61	21	3	43	49	6
20	51	18	2	36	41	4
19	43	12	2	31	38	2
18	32	9	1	26	30	1
17	28	6	1	21	26	1
16	19	5		18	18	1
15	15	3		11	14	
14	11	3		9	11	
13	9	2		8	7	
12	5	1		6	4	
11	4	1		2	2	
10	3	1		1	1	
9	1				1	
8					1	

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on Biology Tests 71, 72, and 73 as being somewhere in the range ±3 around the reported score.

Melbourne High School 1968-1969

Local Norms

Biology Progress Tests 74 (Phases 2-4), 75 (Phase 2), and 76 (Phases 3 and 4)

Raw Score	Percentile Rank					
	Test 74			Test 75	Test 76	
	Phase 2	Phase 3	Phase 4	Phase 2	Phase 3	Phase 4
38			99			
37		99	99	99		99
36		99	94	99		98
35		98	89	99		96
34		97	81	99	99	94
33		96	74	95	99	92
32		94	66	94	99	88
31		89	58	93	98	85
30		86	46	91	98	79
29	99	80	31	88	96	73
28	98	73	26	83	92	65
27	98	64	18	76	91	56
26	95	57	11	69	89	51
25	92	49	6	64	85	42
24	88	43	3	58	81	35
23	84	36	2	52	77	29
22	80	30	1	46	71	19
21	75	23	1	42	65	15
20	66	20		38	56	9
19	58	16		32	48	8
18	53	13		24	40	5
17	48	9		22	32	5
16	39	7		19	26	3
15	36	5		16	20	1
14	26	4		12	13	1
13	21	3		7	9	1
12	15	2		5	7	
11	11	2		4	5	
10	8	1		2	3	
9	7	1		1	3	
8	5	1			2	
7	2	1			1	
6	1				1	
5						
4						

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on Biology Tests 74, 75 and 76 as being somewhere in the range ±3 around the reported score.

Melbourne High School 1968-1969

Local Norms

Biology Progress Tests 77 (Phase 2) and 78 (Phases 3 and 4)

Raw Score	Percentile Rank		
	Test 77	Test 78	
	Phase 2	Phase 3	Phase 4
37			99
36			99
35			99
34			98
33			97
32			97
31		99	95
30		99	95
29		99	95
28	98	99	94
27	97	99	92
26	96	99	87
25	96	98	85
24	94	98	79
23	92	97	71
22	88	96	63
21	84	93	55
20	79	91	47
19	78	86	38
18	72	81	30
17	66	73	19
16	55	64	15
15	47	56	13
14	33	48	9
13	24	38	7
12	21	31	5
11	15	23	5
10	12	16	3
9	9	11	1
8	6	6	1
7	3	3	
6	3	2	
5	1	1	
4	1	1	
3	1		
2	1		

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on Biology Tests 77 and 78 as being somewhere in the range ±3 around the reported score.

Melbourne High School 1968-1969

Local Norms

Biology Progress Test 20 (Phase 2)

Raw Score	Percentile Rank
32	98
31	97
30	95
29	93
28	91
27	88
26	81
25	79
24	74
23	63
22	57
21	48
20	42
19	37
18	30
17	26
16	21
15	16
14	13
13	11
12	8
11	5
10	3
9	1

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on Biology Test 20 as being somewhere in the range ±3 around the reported score.

Melbourne High School 1968-1969

Local Norms

Biology Progress Test 79 (Phases 3 and 4)

Raw Score	Percentile Rank Phase 3	Percentile Rank Phase 4
29		99
28		99
27	99	98
26	99	96
25	99	92
24	98	80
23	94	73
22	91	60
21	87	50
20	81	37
19	72	29
18	64	19
17	58	11
16	47	7
15	39	4
14	30	1
13	23	1
12	17	
11	12	
10	8	
9	6	
8	4	
7	2	
6	1	
5	1	
4	1	

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on Biology Test 79 as being somewhere in the range ±3 around the reported score.

MATHEMATICS PROGRESS TEST SCORES 1968-1969

Following, for your information and use, are the scores obtained by students in your classes. Two aspects of the following reports have implications for score interpretation, and therefore require comment. First, all test scores, obtained from these or any other tests, contain an error component. If a student were to take many forms of the same test and we were able to control such extraneous factors as fatigue and practice, the scores which the student made on these various forms would distribute themselves in the familiar bell-shaped curve. Some of his scores would be relatively low, others would be high, and most of them would cluster around a central point. The average of this distribution of scores could be called the student's true score.

In practice, it is generally possible for us to give only one form of a test to a student. The score he obtains on this one form is not necessarily his true score. It represents only one of the many scores which he would have made if he had taken a large number of alternate forms of the test.

Second, students inevitably make errors in gridding identification information on their answer sheets. These errors are, of course, more numerous during the first year of a new testing program. The data processing system has been designed such that misgridded answer sheets will nevertheless be scored properly. However, a gridding error may result in that score being reported in the wrong group. Thus the score from an answer sheet incorrectly gridded "Mathematics Phase 3, Test 30" will be reported with that group, even though the student was really in

Phase 2. If in the course of examining these scores you note such irregularities, a word to the offending gridders would undoubtedly improve the future operation of the system.

The scores reported are raw scores; i.e., the number of test questions answered correctly. In order to interpret a raw score in terms of relative standing within the phase, it must be converted to a percentile rank through use of the norms tables provided. For example, a raw score of 19 on Mathematics Test #30, Phase 2, has a percentile rank of 11. This means that 11% of the students in Phase 2 scored lower than 19. Again, we remind you that test scores are not perfectly precise. A good rule of thumb is to consider each student's score as being somewhere in the range ± around the reported score. Thus a more conservative interpretation of a raw score of 19 would be that this student's true score is probably somewhere in the range 8-14.

You may wish to use these test results as a student counseling aid. Percentile ranks (or ranges of percentile ranks) can be used to determine each student's standing with respect to others in the same or different phases.

Melbourne High School 1968-1969
Local Norms

Mathematics Progress Test 30 (Phases 1 and 2)

Raw Score	Phase 1 Decile Rank	Phase 2 Percentile Rank
50	10	
49	10	
48	10	99
47	10	99
46	10	98
45	10	95
44	10	92
43	10	89
42	10	85
41	9	85
40	9	79
39	9	75
38	9	72
37	9	68
36	9	65
35	8	62
34	8	59
33	7	54
32	7	49
31	6	41
30	6	40
29	5	39
28	5	33
27	4	31
26	4	25
25	4	24
24	3	22
23	3	19
22	3	16
21	2	14
20	2	13
19	2	11
18	2	9
17	2	7
16	1	6
15	1	5
14		5
13		3
12		3
11		1
10		1

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on Mathematics Test 30 as being in the range ±3 around the reported score.

Melbourne High School 1968-1969

Local Norms

Mathematics Progress Test 31 (Phases 1 and 2)

Raw Score	Phase 1 Decile Rank	Phase 2 Percentile Rank
50	10	
49	10	
48	10	
47	10	
46	10	
45	10	
44	10	99
43	10	99
42	10	99
41	10	99
40	10	99
39	10	99
38	10	99
37	10	97
36	10	97
35	10	95
34	10	95
33	10	95
32	10	94
31	10	89
30	9	87
29	9	86
28	9	84
27	8	82
26	8	79
25	8	73
24	8	70
23	7	69
22	7	64
21	7	60
20	6	55
19	6	50
18	6	42
17	4	37
16	4	32
15	4	25
14	3	18
13	2	11
12	2	4
11	2	2
10	2	2
9	1	1
8	1	1

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on Mathematics Test 31 as being somewhere in the range ±3 around the reported score.

Note: Since the phase 1 norms distribution contains a relatively small number of cases, the computation of percentile ranks would be inappropriate. Therefore, decile ranks are given.

Melbourne High School 1968-1969

Local Norms

Mathematics Progress Test 33 (Phases 1 and 2)

Raw Score	Phase 1 Decile Rank	Phase 2 Percentile Rank
50	10	
49	10	
48	10	
47	10	
46	10	
45	10	
44	10	
43	10	
42	10	
41	10	
40	10	
39	10	
38	10	
37	10	
36	10	
35	10	
34	10	
33	10	
32	10	
31	10	
30	10	99
29	10	98
28	10	98
27	10	98
26	10	98
25	10	98
24	10	98
23	10	98
22	10	98
21	10	98
20	10	95
19	10	89
18	10	81
17	10	73
16	9	68
15	8	57
14	7	49
13	6	39
12	4	28
11	3	23
10	2	11
9	1	9
8	1	6
7	1	3
6	1	3
5		3
4		3
3		3
2		2
1		1

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on Mathematics Test 33 as being somewhere in the range ±3 around the reported score.

Melbourne High School 1968-1969
Local Norms

Mathematics Progress Test 32 (Phases 1 and 2)

Raw Score	Phase 1 Decile Rank	Phase 2 Percentile Rank
50	10	
49	10	
48	10	
47	10	
46	10	
45	10	
44	10	
43	10	
42	10	
41	10	
40	10	
39	10	99
38	10	99
37	10	98
36	10	98
35	10	98
34	10	98
33	10	98
32	10	96
31	10	95
30	10	95
29	10	93
28	10	93
27	10	90
26	10	88
25	9	86
24	9	83
23	9	79
22	8	74
21	8	72
20	7	68
19	7	64
18	7	57
17	6	53
16	5	46
15	3	36
14	3	29
13	3	22
12	2	16
11	2	11
10	2	7
9	2	4
8	1	2
7	1	1
6	1	

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on Mathematics Test 32 as being somewhere in the range ±3 around the reported score.

ENGLISH PROGRESS TEST SCORES 1968-1969

Following, for your information and use, are the scores obtained by students in your classes. Two aspects of the following reports have implications for score interpretation, and therefore require comment. First, all test scores, obtained from these or any other tests, contain an error component. If a student were to take many forms of the same test and we were able to control such extraneous factors as fatigue and practice, the scores which the student made on these various forms would distribute themselves in the familiar bell-shaped curve. Some of his scores would be relatively low, others would be high, and most of them would cluster around a central point. The average of this distribution of scores could be called the student's true score.

In practice, it is generally possible for us to give only one form of a test to a student. The score he obtains on this one form is not necessarily his true score. It represents only one of the many scores which he would have made if he had taken a large number of alternate forms of the test.

Second, students inevitably make errors in gridding identification information on their answer sheets. These errors are, of course, more numerous during the first year of a new testing program. The data processing system has been designed such that misgridded answer sheets will nevertheless be scored properly. However, a gridding error may result in that score being reported in the wrong group. Thus the score from an answer sheet incorrectly gridded "English Phase 4, Test 35" will be reported with that group, even though the student was really in

Phase 3. If in the course of examining these scores you note such irregularities, a word to the offending gridders would undoubtedly improve the future operation of the system.

The scores reported are raw scores; i.e., the number of test questions answered correctly. In order to interpret a raw score in terms of relative standing within the phase, it must be converted to a percentile rank through use of the norms tables provided. For example, a raw score of 12 on English Test #35, Part I, Phase 3, has a percentile rank of 81. This means that 81% of the students in Phase 3 scored lower than 12. Again, we remind you that test scores are not perfectly precise. A good rule of thumb is to consider each student's score as being somewhere in the range ±2 around the reported score for Part I, and ±3 around the reported score for Part II and Total. Thus a more conservative interpretation of a raw score of 12 would be that this student's true score is probably somewhere in the range 10-14, in the case of a Part I score.

You may wish to use these test results as a student counseling aid. Percentile ranks (or ranges of percentile ranks) can be used to determine each student's standing with respect to others in the same phase.

Melbourne High School 1968-1969

Local Norms

English Progress Tests 34 (Phase 2), 35 (Phase 3), and 36 (Phase 4)

Raw Score	Percentile Rank Test 34 Part I*	 Part II**	 Test 35 Part I*	 Part II**	 Test 36 Total
46					99
45				99	99
44				99	99
43				99	97
42				99	97
41				99	96
40		99		99	94
39		99		99	92
38		99		99	90
37		99		99	88
36		99		99	86
35		99		99	83
34		99		99	78
33		99		99	71
32		99		98	69
31		99		97	63
30		99		96	57
29		99		95	52
28		97		93	46
27		96		90	38
26		94		88	30
25		92		84	24
24		88		79	19
23		86		74	15
22		83		67	11
21		76		62	9
20	99	69	99	55	6
19	99	61	99	48	4
18	99	54	99	41	3
17	99	47	99	31	2
16	99	37	98	25	2
15	99	30	96	19	1
14	98	26	93	14	1
13	95	20	88	10	1
12	93	13	81	7	
11	89	8	74	5	
10	87	5	62	3	
9	72	4	49	2	
8	59	2	37	1	
7	41	1	24	1	
6	24		13	1	
5	12		7		
4	5		4		
3	1		1		
2	1		1		
1			1		

*Spelling (items 1-20)

**Sum of Sections II, III, and IV (items 21-65)

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on English Tests 34, 35, and 36 as being somewhere in the range ±2 around the reported score for Part I, and ±3 around the reported score for Part II and Total.

Melbourne High School 1968-1969
Local Norms

English Progress Tests 37 (Phase 2), 38 (Phase 3), and 39 (Phase 4)

Raw Score	Percentile Rank				
	Test 37		Test 38		Test 39
	Part I*	Part II**	Part I*	Part II**	Total
55					99
54					99
53					99
52					99
51					99
50					99
49					97
48					97
47					97
46					91
45		99		99	89
44		99		99	84
43		99		99	80
42		99		99	75
41		99		99	68
40		99		98	64
39		99		97	58
38		99		96	51
37		98		94	43
36		97		91	35
35		97		88	31
34		96		85	25
33		96		81	19
32		95		76	16
31		93		72	12
30		91		67	10
29		89		62	7
28		87		57	5
27		84		52	4
26		82		47	3
25		78		42	3
24		69		38	2
23		65		33	2
22		60		29	1
21		55		25	1
20	99	48	99	22	1
19	99	42	99	18	1
18	99	36	99	16	1
17	99	32	98	13	
16	98	26	95	11	
15	95	20	91	8	
14	91	16	84	6	
13	82	14	76	5	
12	76	9	67	3	
11	66	7	59	2	
10	58	5	49	1	

English Progress Tests 37, 38, and 39, Continued

Raw Score	Percentile Rank				
	Test 37		Test 38		Test 39
	Part I*	Part II**	Part I*	Part II**	Total
9	45	2	39	1	
8	31	1	28	1	
7	17		20	1	
6	12		13	1	
5	8		6		
4	3		3		
3			1		
2			1		
1			1		

*Spelling (items 1-20)

**Sum of sections II, III, and IV (items 21-65)

Note: Test scores are not perfectly reliable. A good rule of thumb is to consider each student's score on English Tests 37, 38, and 39 as being somewhere in the range ±2 around the reported score for Part II and Total.

Melbourne High School 1968-1969
Local Norms

English Progress Tests 40 (Phase 2), 41 (Phase 3), and 42 (Phase 4)

Raw Score	Percentile Rank				
	Test 40		Test 41		Test 42
	Part I*	Part II**	Part I*	Part II**	Total
50					99
49					99
48					99
47					99
46					99
45				99	97
44				99	96
43				99	92
42				99	88
41				99	83
40		99		98	78
39		99		98	73
38		99		97	67
37		99		96	60
36		99		94	52
35		99		92	46
34		99		88	39
33		99		83	32
32		98		79	28
31		98		76	23
30		97		72	17
29		95		66	15
28		93		61	10
27		91		56	8
26		89		51	7
25		83		46	7
24		79		41	4
23		72		36	3
22		65		31	2
21		59		27	2
20	99	53	99	24	2
19	98	48	97	20	2
18	97	39	91	17	1
17	94	33	83	15	1
16	87	27	70	12	1
15	79	20	57	10	1
14	68	17	47	8	
13	59	15	35	6	
12	50	10	27	4	
11	35	8	19	3	
10	28	5	14	2	
9	18	4	11	1	
8	14	3	8	1	
7	9	2	5		

English Progress Tests 40 (Phase 2), 41 (Phase 3) and 42 (Phase 4)

(continued)

	Percentile Rank				
	Test 40		Test 41		Test 42
Raw Score	Part I*	Part II**	Part I*	Part II**	Total
6	5	2	4		
5	4	1	2		
4	2		1		
3	1		1		

*Spelling (items 1-20)
**Sum of Sections II, III, and IV (items 21-65)

Note: Test scores are not perfectly precise. A good rule of thumb is to consider each student's score on English Tests 40, 41 and 42 as being somewhere in the range ±2 around the reported score for Part I, and ±3 around the reported score for Part II and Total.

APPENDIX D

STUDENT CAPABILITY PROFILE

STUDENT CAPABILITY PROFILE BREVARD COUNTY (FLORIDA) NON-GRADED SCHOOL PROJECT

I.D. NO.
SCHOOL -
DATE OF ADMISSION

1. PHASES PREFERRED AND COMPLETED

	YEAR 1 PREF.	YEAR 1 COMP.	YEAR 2 PREF.	YEAR 2 COMP.	YEAR 3 PREF.	YEAR 3 COMP.
ENGLISH						
MATHEMATICS						
SCIENCE						
SOCIAL STUDIES						
OTHER						

2. STUDENT APTITUDE

A. DAT SCORES (PERCENTILE)

	YR 1	YR 2	YR 3
1. VERBAL REAS.			
2. NUM. ABILITY			
3. ABST. REAS.			
4. CLERICAL			
5. MECH. REAS.			
6. SPACE REL.			
7. LANG. SPELL.			
8. LANG. GRAM.			
9.			
10.			

B. EXPRESSED MAJOR APTITUDE

	YR 1	YR 2	YR 3
1. HUMANITIES			
2. SCIENCES			
3. FINE ARTS			
4. RECREATIONAL			
5. MANIPULATIVE			
6.			
7.			
8.			
9.			
10.			

3. PAST PERFORMANCE

A. ACHIEVEMENT	LAST	AVG.	B. ABSENCES (BY SEMESTER) YR. 1	YR. 2	YR. 3
ENGLISH					
MATHEMATICS					
SOCIAL STUDIES					
OTHER					

4. STYLES OF LEARNING

(DEGREE OF INDIVIDUALIZATION)	1965	1966	1967
ENGLISH			
MATHEMATICS			
SCIENCE			
SOCIAL STUDIES			
OTHER			

5. ACHIEVEMENT TESTS (RECORDED IN PERCENTILE RANK)

A. STANFORD	1965	1966	1967
1. ENGLISH			
2. NUM. COMP.			
3. MATHEMATICS			
4. READING			
5. SCIENCE			
6. SOC. STUD.			
7. SPELLING			

B. SCHOLASTIC APTITUDE TEST (SAT)	YR 1	YR 2	YR 3
1. VERBAL			
2. QUANTITATIVE			

C. FLORIDA NINTH GRADE TESTING

1. MET. ACHIEV.(MAT)
- A. READING
- B. LANGUAGE
- C. ARITH. COMPUT.
- D. ARITH. PROB SOL
- E. SOCIAL STUDIES
- F. SCIENCE

2. SCHOOL APT.(SCAT)
- A. VERBAL
- B. QUANT.
- C. TOTAL

6. PHASE PREDICTIONS FOR NEXT SEMESTER

ENGLISH
MATHEMATICS
SCIENCE
SOCIAL STUDIES
OTHER

7. CODES

* (IDENTIFIES UNSUCCESSFUL COURSE), X (SEMESTER ABSENCE EXCEEDS 9)
FAV (FAVORABLE), UNF (UNFAVORABLE)